A Clinical Lecture

ON

A CASE OF INFECTIVE ENDOCARDITIS INVOLVING THE PULMONARY VALVES AND ASSOCIATED WITH IMPERFECTION OF THE INTERAURICULAR SEPTUM.[1]

Delivered at the General Infirmary, Leeds, January, 1905,

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GENTLEMEN,—The case which I have to bring to your notice this afternoon is one which presented during life some points of interest and one in which important lessons may be drawn from a consideration of the physical signs observed when viewed in the light of the conditions demonstrated on the post-mortem table. The patient was a girl, aged 15 years, who, when walking home from her work and to all appearances in good health, was on May 25th, 1904, suddenly seized with pain in the back. With some difficulty and with increasing pain she got home, was sick once or twice after partaking of milk and biscuits, and feeling very ill went to bed, where she remained until she was admitted into the infirmary under my care on June 11th. Subsequent questioning of the patient's mother elicited the fact that about a week prior to the onset of the acute symptoms she complained one day of feeling short of breath and sat down for a little time and was noticed to be slightly flushed. During the next few days there were slight symptoms of indigestion but on the evening of May 24th she was dancing vigorously in the street to the strains of a piano organ and on the morning of the attack she went to her work in good spirits and apparently quite well. On the sixth day after taking to bed she had a rigor and this was followed by about four others before she was admitted into the infirmary. The patient was the fourth child in a family of eight, the other members of which were reported as being in good health. She had diphtheria when at school and some tonsillar trouble on two occasions, but there was no history of rheumatism, and her general health had been good.

On admission she was seen by my house physician, Mr. S. T. Crump. She appeared to be fairly comfortable; the temperature was 99·4° F.; there was slight dulness on percussion over the base of the right lung but the breath sounds were readily audible. The heart was beating at about 100 per minute, the first sound at the apex was loud, and there was a systolic bruit limited to the pulmonary area. A few hours after admission a couple of severe rigors occurred in rapid succession, the temperature shot up to 106·6°, dropping to 99°, and in a few hours to 97°, with great sweating and some indication of collapse. It was at this time that I saw the patient first. I noted the dulness on the right side of the chest, but the most pronounced signs were those associated with the heart which was beating with undue frequency and impetuosity. The first sound was extremely loud at the apex, a loud systolic bruit was heard in the pulmonary area followed by an indistinct second sound, but both sounds were clear in the aortic area. The opinion was at once formed that we had before us a case of infective endocarditis with involvement of the pulmonary valves, and the opinion was daily strengthened by the progress of the case. Departing now from the strict order in which the symptoms and signs were noted I call your attention to the temperature chart. The course of the fever was hectic. Rigors to the number of 11 occurred subsequently at irregular intervals until June 22nd. During this period the oscillations of temperature were extreme, the limits being 106·6° and 95°, and the chart presents, as you see, the characteristic "steeple" appearance. It is interesting to note that on the cessation of the rigors the high temperature was more continuous, did not reach such high maxima, and on only one occasion fell below 100°. On June 16th we noted a diastolic bruit loudest in the pulmonary area. This was inaudible next day, but was again made out on the 20th and subsequently. A striking feature in the case, which was noticed many times, was that the bruits were undoubtedly loudest in the pulmonary area. The systolic bruit was audible at the apex and round towards, if not actually in, the axilla. In the left scapulo-vertebral interval it was very loud indeed and though not so loud as in the pulmonary area it was here much louder than at the apex. Examination of the blood by Dr. O. C. Gruner on the 22nd revealed a moderate degree of leucocytosis. There was never any cyanosis nor at any time was there albuminuria. Until the 29th the mental condition was remarkably good between the rigors. There were little or no distress and no thought of death, but a frequently expressed desire to get up. Death occurred on July 1st and during the last 36 or 48 hours there was some delirium. The pallor increased, there was slight epistaxis, a few purpuric spots appeared on various parts of the surface, and one considerable subcutaneous hæmorrhage over the right iliac bone. Towards the end there was some increase in the præcordial dulness and pericardial effusion was suspected, but during the last 36 hours it was not felt that much examination should be made and paracentesis was not considered. An enlargement of the spleen which had been noticed earlier became less marked. Some blood was drawn on June 27th for cultural investigation and next day we got a report that after 20 hours' growth the organisms present were found to be streptococci only. Some doubt was, however, thrown on the accuracy of the observation and somewhat to my regret now I did not use antistreptococcic serum.

The necropsy, which many of you saw, was made by myself on July 2nd, some 20 hours after death. Both pleural cavities were obliterated by universal adhesions. These were especially strong on the right side and here several small collections of pus were found in the interstices of the connective tissue. The right lung was dense, especially at the base, but there were no signs of embolism and no hepatisation; the lobes were mutually adherent and the adhesions were infiltrated with pus. The left lung was also dense and airless at the base, more so than in the case of the right, and portions sank in water. At the base was a solid mass which I inclined to attribute to inflammatory consolidation, though it had not the usual appearances presented by recent hepatisation and which I did not think was embolic. The pericardial sac, the walls of which were thickened, contained from about 16 to 20 ounces of blood-stained fluid. There was evidence of recent pericarditis, universal in distribution, in the presence of a fine uniform granular fibrinous deposit on the surface of the heart. Further examination showed that the mitral and aortic valves were entirely free from disease, and that with the exception of one small fibrinous vegetation close to the commissure of its great anterior and septal flaps, the tricuspid had also escaped. There was a large aperture of communication between the right and left auricles, the nature and probable influence of which I shall discuss later. The ductus arteriosus was closed. On inspection before the heart was opened there was seen to be distension of the upper part of the conus arteriosus of the right ventricle and of the adjacent part of the pulmonary artery mainly on its left aspect. This proved to be due to an immense mass of vegetations in connexion with the pulmonary segments, which is well seen in Photograph 1. So completely did this mass at first sight seem to fill the conus and the beginning of the pulmonary artery that it was difficult to understand how any blood could have passed. With some care, however, a probe could be made to pass through fissures in the mass and appear in the pulmonary artery, and between the mass and the antero-right segment which was almost free from disease there was a potential space which in virtue of the blood pressure might have been considerable during life. As already said, the antero-right pulmonary segment was almost free from disease. The antero-left was thickened and everywhere rough from the presence of fungating vegetations which sprang from both its surfaces. It is seen cut across in the illustrations. It was retroverted towards the right ventricle and its condition probably accounted for part of the regurgitation made out during life. The posterior segment was almost unrecognisable until the huge mass of vegetations which sprang from it was cut into, as is shown in Photograph 2. It was seen

[1] For the photographs illustrating the condition of the heart I am indebted to my friend Mr. Michael A. Teale.

to be greatly thickened and imbedded in the mass of vegetations and partially organised fibrinous exudation, between which and the segment it was impossible to draw a sharp line of demarcation. The sinus of Valsalva was filled with fibrin partly organised and partly fungating, and the wall of the artery at this part had yielded, giving rise to a localised aneurysmal swelling of the size of a hazel-nut. Infective endocarditis is one of the well-recognised causes of aneurysm not only of the sinuses of Valsalva and adjacent parts of the large vessels, of the valves of the heart, and of the pars membranacea septi, but, through the occurrence of infecting embolism, of the smaller arteries of the body. The cavity of the right ventricle was somewhat enlarged and its walls were

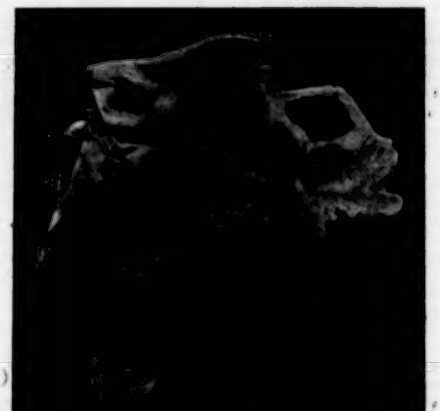
PHOTOGRAPH 1.

Showing the mass of granulations blocking the pulmonary orifice.

markedly hypertrophied. The spleen was enlarged, soft, and adherent to the diaphragm; the kidneys were singularly pale and the capsules separated readily.

In discussing with you the various points of interest in connexion with this case I desire, in the first instance, to call your attention to the presence of the large aperture of communication between the two auricles of the heart. This is, of course, a congenital anomaly and it is well therefore that we should discuss its nature and its possible influence on the circulation before we enter on a discussion of the changes which are clearly of recent development. Now each auricle of the heart is derived from one half of the primitive auricle of the embryo, which in the case of the right auricle has incorporated with it the sinus venosus of the systemic veins, and in the case of the left auricle the corresponding but less familiar sinus venosus of the pulmonary veins. The division of the primitive auricle into two is initiated by an expansion of each half of the chamber in association with its increasing function, from which it results that an aperture of communication exists between the two developing auricles, large indeed, but relatively small when compared with the sectional area of each. Now in some cases nature appears to make no further attempt towards the development of an inter-auricular septum, if indeed we may refer to the above changes as constituting any such attempt, and the two auricles remain in free communication by a large aperture limited above and behind by a crescentic ridge with a rounded margin, corresponding to the portion of primitive auricular wall which has not taken part in the bilateral expansion and reaching below to the upper or attached margins of the tricuspid and mitral valves which are then seen to be practically continuous with one another above and behind the interventricular septum, for, as is known, they are developed by downward growth from the endocardial cushions which divide the common auriculo-ventricular channel into two. This arrest of development is, of course, very rare and what usually happens is, according to the well-known researches of Born, that a septum grows downwards with a concave advancing margin from the upper and back part of the common auricle—that is, from the above-noted ridge—and ultimately fuses with the tissue separating the two auriculo-ventricular apertures. Before it does so, however, it becomes fenestrated some distance from its free margin and a large aperture results which becomes modified into the foramen ovale. Now the primary septum, as it is termed, may fail to reach the partition between the two auriculo-ventricular openings and an aperture remains resembling that described above as reaching down to the attached margins of the auriculo-ventricular valves but differing from it in being smaller and in being limited above by the concave margin of the primary septum and not merely by a ridge of auricular wall. Examples of this have been put on record by Dr. Norman Moore,[2] who comments on its rarity, and by myself.[3] The fenestration of the primary septum, which, as we have seen, takes place before its margin reaches its destination, may, instead of forming a single large aperture, result in the formation of a sieve-like membrane or it may leave only a very scanty network of tissue. Confining our attention, however, to the first of these results, the aperture destined to develop into the foramen ovale varies in size, is bounded below by the remains of the primary septum, and therefore does not reach to the attached margins of the auriculo-ventricular valves, and is bounded behind and above either by the crescentic ridge above mentioned or, if any of the primary septum remains at the part, by that membrane. There now grows downwards and forwards from close to the origin of the primary septum a second septum which passes to the right of the oval aperture. This also has a concave advancing margin and, as is well known, forms

PHOTOGRAPH 2.



Showing the mass of granulations cut through, together with the arterial wall, which is aneurysmal

the annulus ovalis or isthmus Vieussenii, while an upward and backward growth of the lower margin of the oval aperture forms the valve of the foramen ovale and ultimately when this closes, as it usually but not invariably does, the floor of the fossa ovalis. It is interesting to note that these changes in connexion with the formation of the foramen ovale and fossa ovalis may occur, gratuitous though they may then appear, even when the primary septum does not reach the attached margins of the auriculo-ventricular valves. There are several errors in development, therefore, which may lead to there being a communication between the two auricles throughout life. To which of these should the anomaly be attributed in our case? Now the lower and anterior margin of the opening is about three-quarters of an inch from the attached margin of the septal flap of the tricuspid valve and about half an inch from that of the

[2] Transactions of the Pathological Society, vol. xxxii., p. 40.
[3] Journal of Anatomy and Physiology, vol. xxxiii.

mitral, so it cannot be due either to a complete absence of the primary septum or to the failure of that membrane to reach the partition between the two auriculo-ventricular openings. On the other hand, it is bounded above and behind by the thick crescent-shaped ridge which has already been referred to more than once. I regard it, therefore, as representing the earlier stage in the formation of the foramen ovale and as being due to coalescence of the fenestræ in the primary septum. Careful inspection of the crescentic ridge shows along its margin a very delicate fringe of tissue as if the secondary septum were present in a very rudimentary form. Perhaps one ought not to press for a distinction between this form of deficiency of the septum and a widely patent foramen ovale, but I am led to the attempt by the great size of the opening—which measures one and a half inches by one inch—by the thickness of its margins, by the absence of any growth of tissue to form the valve of the foramen, and by the almost total absence of the secondary septum which should form the annulus.

Communications between the two auricles of the heart, even when direct, non-valvular, and of great size, are probably of small importance. It is a common belief that they necessarily lead to cyanosis, but they may be unattended with this symptom or with signs of embarrassed circulation if there be no obstruction to the passage of the blood in its normal direction. If in such cases blood does pass from one auricle to the other the flow will probably be from the left auricle to the right and not in the opposite direction, for the pressure of blood in the left auricle is higher both during its systole and during its diastole than in the cavity of the right side. Evidence of the truth of the former statement is provided by the greater thickness of its muscular wall, and during its diastole we must remember that it is filled by the contraction of the right ventricle which forces the blood into it through the pulmonary or lesser circulation, whereas in the case of the right auricle the pressure falls to zero or is actually negative in the great veins from which it receives its blood stream. Some of the blood, therefore, returning from the lungs, which reached our patient's left auricle throughout her life prior to the oncome of her acquired cardiac disease, would pass into the right auricle and so through the right ventricle and pulmonary system a second time. In this way the right ventricle would have a larger amount of blood to deal with than the left, and it is to this that I attribute its dilatation and its consequent adaptive hypertrophy rather than to the condition of the pulmonary orifice found on necropsy, for the latter was manifestly a recent condition. In this connexion it is interesting to note that the normal excess of sectional area of the pulmonary artery over that of the aorta was more marked than usual, and that this is a relationship that has been frequently noticed in cases of imperfect cardiac septa which have been unaccompanied by cyanosis. Clearly, therefore, the condition was one which was not conducive to the occurrence of cyanosis, for some of the blood must actually have traversed the pulmonary system at least twice to every single circuit it made of the general system. (Figs. 1, 2, and 3.)

With the supervention of the pulmonary valvulitis, the consequent pulmonary obstruction, and the increase of pressure in the right side of the heart it is clear that the flow of blood from the left auricle to the right would cease and be succeeded by a flow in the opposite direction. It is not so easy to explain the continued absence of cyanosis under these new conditions. It is, I believe, well established that a considerable admixture of venous with arterial blood may occur without cyanosis unless there be at the same time some obstruction to the flow. In our patient the tendency to its development may have been lessened by the progressive anæmia which was marked and by the condition of absolute rest with consequent muscular relaxation which was maintained. We have, indeed, seen that during life more blood may have passed along the pulmonary artery than at first sight would appear compatible with the conditions about its orifice and we must not forget that the driving force behind the pulmonary obstruction was that of a right ventricle which had been accustomed throughout life to do an extra amount of work for the reasons I have already tried to explain. Still, it is very remarkable that with a condition of pulmonary obstruction such as we have seen and in the absence of any assistance to the circulation of the blood through the lungs such as might be afforded by a patent ductus arteriosus, for this was closed, it was possible to note up to within a few hours of the patient's death that there was no cyanosis.

In connexion with the relationship of the auscultatory signs and the post-mortem appearances there are some points which call for comment. The systolic and diastolic bruits were heard loudest at the third left costal cartilage and inner end of the second space and the latter was conducted down the left margin of the sternum. Now, aortic and especially diastolic aortic murmurs are often heard loudest at the left side of the sternum. I am convinced that this is quite common but I shall not enter into its explanation at present. The question of whether the bruits were really aortic or not was discussed. The pulse was against aortic regurgitation; on the other hand, the absence of any marked evidence of right-sided enlargement and the absence of venous engorgement made us pause before coming definitely to the diagnosis of a pulmonary lesion and I think the chief factor which guided us correctly was the great loudness of the systolic part of the bruit in the pulmonary area. A very remarkable feature which I cannot satisfactorily explain was the loud strictly systolic bruit audible in the left scapulo-vertebral interval. This, as was mentioned before, was louder than at the apex but not so loud as in the pulmonary area. During life we regarded this as a point in favour of an aortic as against a pulmonary origin for the bruit, which we conceived might be carried thus far with the blood stream. The indications of a pulmonary origin were, however, so strong that I expressed the opinion that there might be a patent ductus arteriosus with a flow of blood from the pulmonary artery to the aorta which would probably determine the transmission of the bruit in this way to the back. I was bound to point out at the same time that in most cases of patency of the ductus arteriosus the flow of blood was in the opposite direction—namely, from the aorta to the pulmonary artery—for they were usually associated with pulmonary

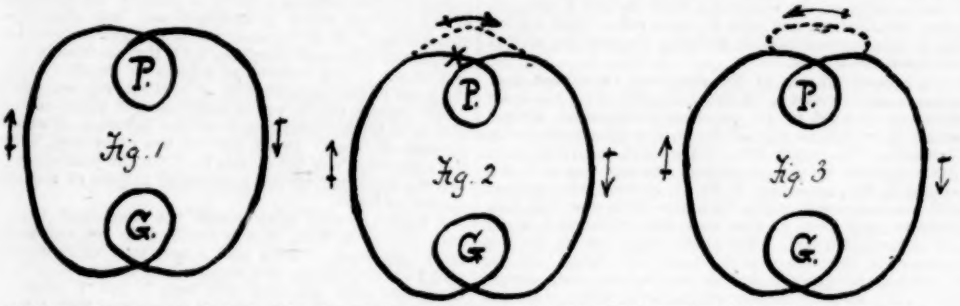


Fig. 1 shows the normal condition in which the auricular septum is complete and in which, therefore, all the blood returning from the general system, G, is constrained to pass through the pulmonary system, P.
In Fig. 2, where there is deficient septum or patent foramen ovale and some obstruction to the flow of blood through the lungs, such as pulmonary stenosis, indicated by the ×, some of the blood will make the shorter circuit from the right auricle to the left, indicated by the dotted line.
In Fig. 3 where there is not any obstruction to the flow of blood through the lungs, the current of blood will, as explained in the text, be from the left auricle to the right, through the deficiency in the septum.

stenosis, a lesion which determines a low pressure of blood in the pulmonary artery and thus, fortunately for the access of blood to the lungs, there results a flow from the aorta through the ductus which prevents its closing as it normally does. I am still at a loss to explain the loudness of the systolic bruit in the left scapulo-vertebral interval. I had never heard it advanced that obstructive pulmonary bruits are heard loud in this position. It may be contended that the bruit we heard behind was not the same as that heard in front but was a bruit in connexion with the deficient auricular septum and caused by blood passing from the right auricle into the left, as I have explained it must have done after the supervention of the pulmonary valve lesion. Such a bruit, produced as it would be by a fluid vein in the left auricle, might well be heard behind, for the same reason that the bruit of mitral regurgitation is heard in this situation—namely, because the body of the left auricle is the most posterior part of the heart, being separated from the spinal column only by the œsophagus and aorta. Now the largeness of the aperture is, I think, against the likelihood of its having been a cause of a fluid vein in blood passing through it. We must remember also that the bruit in question was definitely confined in point of time to the ventricular systole, a period during the beginning, at all events, of which the flow of blood through the orifice would be at its minimum. I am therefore constrained to think that the bruit produced in the pulmonary artery by the obstruction caused by the vegetations was really transmitted, and with what to me appears to be a surprising degree of facility, to the back of the chest. In this connexion it must be remembered that infective endocarditis of the pulmonary valve is a comparatively rare affection, that the severity of the symptoms often forbids a detailed physical examination, and that in some cases there are no bruits, so that opportunities of studying the problem of this transmission are limited.

I have pointed out that in this case, with the exception of an insignificant vegetation on the tricuspid valve, the endocarditis was confined to the pulmonary segments. Simple endocarditis, which, as you all know, is much commoner on the left side of the heart than on the right, occurs so rarely on the pulmonary valve as a solitary affection that in 11,000 necropsies it was, according to Dr. G. Newton Pitt,[4] present in only one instance in which the other valves were free from vegetations, and even in that case the mitral and aortic valves were thickened. Malignant endocarditis also is commoner on the left side than on the right, but the difference in incidence is not so striking as in the simple form. When we consider the conditions to which this form of endocarditis is secondary, such as septic phlebitis, osteomyelitis, gonorrhœa, puerperal fever, and septic middle-ear disease, it may occur to you as a probable explanation of this that the causative agent reaches the right side of the heart first and partly neutralises the conditions, whatever they may be, that lead to the left side of the heart being more prone to this affection. If this occurs to you as a reasonable explanation I must point out that you are adopting the view of Virchow, who held that infection reaches the free surface of the valves by the main blood stream and not that it attacks the valves through their special blood-vessels as is, I believe, maintained by Köster. Here I may point out that in the adult with healthy valves blood-vessels are confined to the bases of the auriculo-ventricular valves and are not present at all in the semilunars. This may not be an insuperable objection to the view of Köster, but the familiar appearance of a fringe of vegetations close to the free margin of valves which in other respects appear normal, together with other considerations, have always made me incline to the view of Virchow. Again, I believe it to be the case, though I cannot quote figures in support of my opinion, that when infective endocarditis occurs as a complication of pneumonia the incidence is in a very special degree on the mitral and aortic valves,—those, namely, over which the poison-laden blood must first pass.

Now the cause of the endocarditis in our patient is by no means certain. I have said that the mass of consolidation in the left lung did not appear to me to be embolic and was not therefore secondary to the cardiac disease. Probably we may assume that this and the pleural affection were primary. Now, most of the blood from the pleura reaches the right auricle by the bronchial and azygos veins and the superior vena cava, and that from the alveolar walls of the lungs reaches the left auricle by the pulmonary veins. In respect, however, of capillary communication between the bronchial and pulmonary systems some blood will also be returned into the left auricle from the visceral pleura and connective tissue of the lungs. We have seen that prior to the oncome of the pulmonary endocarditis blood must have been passing from the left auricle to the right through the deficiency in the septum and in this way the valves of the right side of the heart would be exposed to a greater risk of infection than in ordinary circumstances in which all the blood that had run the gauntlet of the lungs and some of that returning from the pleura must pass in the first instance through the left side of the heart.

This, then, I consider to be the connexion, if indeed there be any, between the deficient auricular septum and the incidence of the endocarditis on the valves of the right side of the heart. It is true that for the reasons already given the deficiency in the septum was associated with the necessity for an increased amount of work on the part of the right side with consequent increased strain on the valves, and that this, in the opinion of some, makes them more liable to endocarditis, nor must we overlook the well-known connexion between endocarditis not only of the simple but of the malignant variety, and certain congenital affections of the heart. On analysing 57 cases of malignant endocarditis of the pulmonary valves Dr. Newton Pitt[5] found that there was patency of the interventricular septum in ten cases, congenital pulmonary stenosis in eight, and patent ductus arteriosus in three, and he says: "The stream regurgitant through an aperture in the ventricular septum or through a patent ductus arteriosus tends to damage the endothelium of the wall on which it impinges and thus gives rise to vegetations." It is very common to find granulations on the margins of abnormal openings and the thickening of the epithelium of the ventricular septum or anterior aspect of the great mitral segment with or without vegetations which I have pointed out to you in many cases of aortic regurgitation is a further illustration of the influence of abnormal currents of blood. In the case we are discussing, however, the association was not of this kind, for the pulmonary valve was not subjected to the mechanical impact of any special current of blood.

I have not said much about the treatment that was adopted, for in truth it was confined to the endeavour to meet symptoms. I have said it is matter of regret to me that I did not employ antistreptococcic serum which in some cases has been attended with benefit and I think I was wrong in not doing so, but my reason was that I was not sure that the cause of the endocarditis was a streptococcic infection. Probably it was a mixed infection, for the vegetations showed pneumococci as well as streptococci. To employ antistreptococcic serum to combat an affection which might be pneumococcic in origin was to my mind to forget that men do not gather grapes from thorns or figs from thistles, and I was also mindful of Carlyle's grotesque but brilliant passage in "Sartor Resartus,"[6] in which he says: "It is maintained, by Helvetius and his set, that an infant of genius is quite the same as any other infant, only that certain surprisingly favourable influences accompany him through life, especially through childhood, and expand him, while others lie closefolded and continue dunces. Herein, say they, consists the whole difference between an inspired Prophet and a double-barrelled Game-preserver ..... 'With which opinion,' cries Teufelsdröckh, 'I should as soon agree as with this other, that an acorn might, by favourable or unfavourable influences of soil and climate, be nursed into a cabbage or the cabbage-seed into an oak.'"

[4] G. Newton Pitt: Allbutt's System, first edition, vol. vi.

[5] Loc. cit.

[6] Sartor Resartus, Book II., Chap. ii.

SCHOLARSHIPS FOR STUDENTS IN MIDWIFERY.—In January, 1907, the London County Council will award not more than six scholarships to students in midwifery. Candidates must be ordinarily resident within the county of London and must have been between 24 and 40 years of age on July 31st, 1906. The value of each scholarship will be £25 and the course of training will extend over a period of six months. Forms of application may be obtained from the Executive Officer, Education Department, Victoria Embankment, W.C., and must be returned to the same address not later than Saturday, Oct. 20th, 1906. Further information may also be obtained on application to this address.

An Introductory Address
ON
KING'S COLLEGE HOSPITAL: A RETROSPECT.

Delivered at the Opening of the Medical Session, Oct. 2nd, 1906,

By T. PRIDGIN TEALE, M.A., M.B. OXON., F.R.C.S. ENG., F.R.S.,
CONSULTING SURGEON TO THE GENERAL INFIRMARY AT LEEDS.

GENTLEMEN,—Fifty-four years ago I sat in the hall of King's College listening to the opening address of my first medical session—a time preceding the Crimean war and the Indian Mutiny, when ideas as to the improvement of hospital construction and sanitation, if they existed at all, were in their infancy. It is just over 22 years since I became, along with my friend and colleague Mr. Wheelhouse, consulting surgeon to the Leeds General Infirmary and had the privilege, whilst ceasing to be full surgeon or to take any serious responsibility in clinical teaching, of being able to use six beds for patients ordered in by myself. I need hardly say that this right I used fully, with advantage to myself in keeping in touch with advancing surgery, and I venture to hope with no countervailing detriment to the work of the hospital or medical school. Now, however, I have gradually withdrawn from the active practice of my profession and have become a looker-on. As such may I not claim the privilege of making the subject of this address a looking backwards, rather than a critical review of the present, or a forecast of the future? Indeed, I feel justified in so doing inasmuch as I am one of a very small number now living who have seen through and taken part in the greatest revolution in surgical and medical practice and in medical education that probably the world has ever known, and one of a still smaller band of men whose student life began in the original King's College Hospital, who, having witnessed the replacement of the old by a new one, your present hospital, are still living to wish God-speed to the magnificent new building of which the plans have been worked out by your architect, Mr. Pite.

The very name, King's College Hospital, is an epitome of its history. When the medical school of King's College was first established it had no hospital of its own, its students being dependent upon the hospitality of an alien hospital, not conveniently situated for students working at the college in the Strand. Feeling the need of a hospital of their own at a more convenient distance from the school and under the control of the staff the authorities purchased the old Clement Danes workhouse, flanked by a disused burial ground as an "open space." Such was the hospital to which I came as a student in 1852, graced by the perfect surgical manipulation of Fergusson, by the consummate clinical teaching of Todd, and the exquisite and delicate surgery and fine diagnostic instinct of Bowman. As my contemporaries, most of them my seniors, I recall Hulke, George Lawson, Christopher Heath, Samuel Dougan Bird, Conway Evans, William Preston Goodall, now passed away, and Buzzard, Edward Liveing, and Duffin still amongst us. Partridge, anatomist and artist, was Fergusson's colleague as a surgeon; Budd was Todd's colleague as physician; Henry Lee was assistant surgeon along with Bowman; George Johnson and Guy were assistant physicians; and John Wood in the dissecting room at the College was the prince of anatomical demonstrators. As a transition I doubt not the makeshift hospital worked well. Certainly there was great clinical enthusiasm amongst us and the most was made of opportunities by the students of that day. Yet this did not blind the authorities to the inadequacy of the building and of the accommodation for patients—an inadequacy which you will appreciate with a sort of horror when I tell you that the theatre served the double purpose of providing for operations and for post-mortem examinations, the dead-house being placed beneath a trap-door in the floor of the operating theatre. It was during my studentship that your present hospital was commenced and the first portion was completed and brought into use in my final year, the initial year of the Crimean war.

Fine as your building is, and planned as it was in accordance with the views of hospital construction then prevalent, it had the disadvantage of being designed on the plans of the block buildings when economy of space was deemed imperative and when windows on one side of a ward were all that were called for. It was just a few years too early. Nursing as a calling which needed careful training was just coming into being, and I remember that in the new wards recently opened ladies came for a short training in nursing before going out to join Miss Nightingale in the hospitals of the Crimean war.

I have just had the privilege of looking over the hospital, guided by Mr. T. B. Peyton Beale, whose father, the last survivor of my teachers at King's, has but recently passed away. I was struck with the very great difficulties with which the committee has had to contend in order to meet even approximately the increasing and exacting demands of modern practice, teaching, and nursing, and the remarkable way in which in such a contracted area these demands have been met. If your present hospital has lost, by having to be built too soon to benefit by modern ideas of construction, the new one will now benefit by the experience gained during the active period of hospital construction of recent years, and so may become the most perfect building of the kind in the kingdom. The motive—that is, the moving force—which has brought about the decision of your council to take the bold step and to face the pecuniary responsibility and effort of building an entirely new hospital on a distant site south of the Thames was the change that has come over this neighbourhood and the shifting of population so that the present building had become, so to speak, stranded and out of the way of the poor who need such an institution in their midst. But it seems to me that, had this not been the case and had the demands of the neighbourhood continued at the high level of former days, the question of a new hospital on a larger site must have become still more urgent, so great are the demands of the modern developments of medicine and surgery and the requirements of teaching in the prolonged medical course.

By the courtesy of Mr. Pite I have looked over the plans for your new building and I cannot but admire the courage of your committee in aiming at an equipment so complete, and the skill with which, provisionally at any rate, the varying and exacting demands of every department have been met. Your old workhouse hospital served its purpose in its day, was the scene of the advanced surgery of its time, and was the sphere of work of one of England's greatest clinical teachers, Todd, and of one of our greatest surgeons, Fergusson. Its cost was probably under £100,000 and it had probably 100 beds. Your new hospital will be planned in the first instance for 408 beds with a possible increase to 600 and the preliminary estimate of cost is £366,712. What a contrast! And what a lesson can be learned from its consideration. Let me endeavour to read the lesson by the light of the hospital I am myself familiar with and of which I possess the annual reports of the last 45 years. I select the Leeds Infirmary because I can speak of what I know, and I take it to be a type illustrating changes and advances which are common, more or less, to hospitals not only in England but all over the world, so free is the inter-communication between nations and so cordial the intercourse between medical men who are using their best faculties for furthering the science of their profession. There are three aspects under which this lesson can be studied: (1) the history of the Leeds Infirmary during the last 45 years; (2) a comparison of the operations recorded in the annual reports of the infirmary, taking for this purpose five periods of five years each; and (3) a consideration of the factors which have contributed to this development and these results.

I. THE EVOLUTION OF THE LEEDS INFIRMARY.

In March, 1864, I was elected surgeon in succession to my father and within a few days the foundation stone of the new infirmary was laid by Mr. Kitson, Mayor of Leeds. Five years later we commenced work in the new building. After much discussion, some of it animated and heated, the decision had been made not to patch up and enlarge the old building on an inadequate site of three acres of inconvenient shape but to build a new hospital on a fresh site of five acres and planned on the best known principles of the day. The leading principle which was then coming to the front was the pavilion system, which secured light and air on each side and at the end of every ward. The first hospital built on this plan, I believe, was the Lariboisière Hospital in Paris. The next, I believe, and certainly the first in England, was in course of construction from the designs

of Sir Douglas Galton, one of the pioneers of sanitary science in this country. The committee selected Gilbert Scott as architect and he, with the late Dr. Chadwick, senior physician to the infirmary, visited hospitals in England and on the continent in order to collect data on which our new building should be planned. Sir Douglas Galton placed his plans of the Herbert Hospital at Woolwich and his trained knowledge most generously at the service of the architect and committee. The result was a building which in general arrangement of parts, had it to be planned anew on the present site, could hardly be surpassed now. Faults there were in detail and as new needs arose these have been corrected. Drains were laid in all directions under buildings, and sanitary conveniences, except as regards the wards, were placed where they ought not to be. Indeed, sanitary science of house drains was not violated—it was simply non-existent. Eight years after the opening of the new building I read in the report of the infirmary for 1877 the following sentence: "During the year the board have given great attention to the sanitary arrangements of the hospital. The system of drainage has been altered so that the waste pipes from the lavatories, sinks, and baths have been disconnected from the soil drains and carried outside the building. The soil pipes have been ventilated and a great number of other alterations have been made, all contributing to better light and ventilation and to the prevention of the possibility of any escape of sewer gas into the wards." This period of the late "seventies" was the time when the medical profession was waking up to the fact that a great proportion of the illness with which it had to deal was the direct result of faulty sanitary arrangements in the dwellings of their patients. Further reconstructions of drainage have taken place from time to time and now I feel sure that the sanitary condition of the hospital is not far short of, even if it does not reach, the best standard of the present time. Let me illustrate the evolution of the Leeds Infirmary by the consideration of three departments: (1) out-patients, (2) nursing, and (3) operation theatre.

1. *The out-patient department.*—In the old infirmary out-patients had to wait in the entrance hall at the bottom of the main staircase leading up to the wards. Cold and comfortless for those waiting, such an arrangement could not but impair the air of staircases, corridors, and wards. The patients were "seen" in a room of moderate size, the three physicians on one day and the three surgeons on another day sitting together in a crowded room, with one very small retiring room. In the new hospital this imperfect arrangement was replaced by a large well-lighted waiting room, with three rooms for the surgeon and three rooms for the physician, and a separate entrance and exit for the out-patients, who were thus cut off from the hospital proper. For many years this served its purpose admirably. But in medicine and surgery science and the requirements of practice advance, staff and patients increase in number, and these provisions of 1869 became inadequate. In 1892 an extension of the infirmary was made at a cost of £48,000. This included as a main feature one of the most complete out-patient departments then in existence. This department consists of a large central hall surrounded by separate suites of rooms for medical, surgical, gynæcological, and ophthalmic patients. Each compartment as well as the dispensary open directly into this hall, and an out-patient operating theatre is provided for the surgeons, and a second for the ophthalmic surgeons with rooms for the recovery of patients after anæsthetics. Thus the arrangements for the treatment of out-patients were raised in the course of less than 25 years from being amongst the worst in the kingdom to a position second to none.

2. *Nursing.*—The old system of nursing was in full play during the early years of my surgeoncy and came to an end with the removal to the new building in 1869. It is appalling to look back on the night nursing. Two elderly women had charge, one of each floor, with its six wards large and small, and their chief function probably was to summon the resident medical officer in case of a death—not to keep alive a poor creature hovering between life and death. One of the day nurses coming on duty at 4 or 5 o'clock in the morning would rouse the male patients by "Now, my lads, arise and shine." Training, of course, was unheard of, and the nurses were under the charge of, and were engaged by, the resident medical officer, a young recently qualified man, and the housekeeper-matron. In 1869 came the "superintendent of nurses." The board would not have a "lady superintendent" or a "sister" at any price, and the domestic arrangements were placed in charge of a housekeeper. This was the beginning of better things, but it was three years before we had a "lady superintendent" thoroughly trained and experienced in nursing.

3. *The operating theatre.*—Need I say much as to the "operating theatre," the development of which, as elsewhere, was gradual? In the old infirmary, one theatre, and no room annexed for any purpose. In the new building of 1869 only one theatre with a small lobby for the staff was provided. There was no anæsthetic room. Anæsthetics were administered in the theatre itself, not only entailing loss of time but exposing the patient to the pain of facing an audience gathered to witness the operation he was about to undergo. There was no recovery-room nor room for the staff. For illumination at night ordinary gas burners were used; there was no electric current either for illumination or other purposes. Cases occurring at night—smashes of limbs, strangulated hernia, and such like—were operated on in the wards by the aid of large tallow candles. From this initial stage improvements and additions went on until in 1897 the old theatres were replaced by our new ones embodying all the best known arrangements and appliances and built at a cost of over £6000.

II.—WORK DONE AND RESULTS.

So far I have spoken of structure and management. Let me now deal with the second aspect under which our lessons can be viewed, the "work done and results," taking the facts from the annual record of the operations by the surgeons, and excluding for the sake of simplicity those done in the gynæcological and ophthalmic departments. For this purpose I have taken five periods of five years each—five half decades—commencing with 1861 and ending with last year. Nothing, I think, could afford a more perfect picture of the progress of surgery or justify more completely the outlay on the improvements of hospital structure and management than these remarkable records from which, at the risk of being tedious and of departing from the custom of introductory addresses, I will venture to bring before you certain telling facts. And here I must apologise to an audience largely composed of lay persons interested in the welfare of the King's College Medical School for dealing for a time with matters essentially professional. As I stated before, I have taken and compared five half decades, 1861–65, 1871–75, 1881–85, 1891–95, and 1901–05. These statistics I propose to deal with from four points of view: (1) the increase in the actual number of operations recorded; (2) the increase in the nomenclature of operations—i.e., the introduction of operations new to surgery; (3) the gradual oncoming and progressive increase in the number of cases operated upon under certain selected headings; and (4) the progressive diminution of death-rate in nearly all the great classes of operation.

1. *Increase in number of operations.*—I will in the first instance compare the first year and the last year of the series, not the half decades. In 1861, 211 operations are recorded with 16 deaths (1 in 13). In 1905, 2544 operations with 142 deaths (1 in 18). And this number does not include the operations in the gynæcological or ophthalmic or casualty departments; the deaths of 1905 include 83 deaths out of 829 cases of accidents (1 in 10) and 57 deaths out of 1715 (1 in 30).

2. *Increase in nomenclature of operations.*—In 1905 there are 90 names of operations which do not appear in 1861, and 1158 operations, nearly half, were performed which were not thought of, many of which could not have been undertaken, at that earlier period.

3. *The introduction and gradual increase of certain classes of operation.*—The term "abdominal section" appears for the first time in the second half decade—1871–75. Under this heading neither rupture, nor hysterectomy, nor operations on the kidney or appendix are included. The numbers are: none in the first period, two in the second, 67 in the third, 279 in the fourth, and 1258 in the last. Let us take another class, "operations on lymphatic glands." These appear first in the third period, 1881–85, as 28; in the fourth period as 462; in the fifth as 429. "Operations for appendicitis" appear first in the fourth period, 1891–98, as 25 in number; in the fifth period as 540. "Operations for the radical cure of rupture," when not strangulated and therefore not in an acute condition. These first appear in the second period, 1871–75, as three in number; in the third period they are 13, in the fourth 225, and in the fifth 790. So much for the increase in numbers.

4. *The progressive diminution of fatality.*—The fourth point which I bring before you and the most telling is the "progressive diminution of fatality." Let us take first "ovariotomy" and its kindred operations. In the first two periods out of 86 cases 1 in 3 proved fatal; in the last period out of 195 cases 1 in 21 proved fatal. To return to "abdominal section," which includes operations in dangerous conditions, such as obstructed bowel and perforations of the stomach and intestine, we find that in the third period 1881–85 out of 67 cases more than half were fatal, in the fourth period out of 267 cases 1 in 3½ was fatal, and in the fifth period out of 1258 cases 1 in 4 was fatal. "Operations on the kidney."—Of 38 in the fourth period 1 in 4½ was fatal; of 132 in the last period 1 in 12 was fatal. "Radical cure of hernia."—Of 225 cases in the fourth period the fatality was 1 in 11. In the fifth period out of 790 cases the fatality was 1 in 197. "Strangulated hernia."—In the first two periods the fatality was nearly 1 in 2, in the third 1 in 3, and in the last two 1 in 5.

The last illustration shall be taken from "amputations." If amputations for accidents and for disease are grouped together the results work out as 1 death in 3½ in the "sixties," 1 in 5¾ in the "seventies," 1 in 6½ in the "eighties" and "nineties," and 1 in 10 in 1900. If amputation for disease alone is taken a somewhat similar progressive diminution occurs. There is one remarkable fact in reference to amputations which demands notice. Whereas in every other instance of operations of which for the purpose of this address I have taken out the figures there is a progressive and often very remarkable increase in the number performed, there is in the number of amputations a progressive and very marked diminution. The figures for the last four half-decades are: in the case of accidents, 166, 113, 91, and 84; in the case of accident and disease combined the numbers are 316, 219, 261, and 208. What can be the explanation? Two things probably concur in producing this result. One is that severe accidents calling for amputation are probably more rare owing to the falling off in new railway construction in the neighbourhood and also to the more stringent laws in reference to protection of machinery and the Employers' Liability Acts. The second, and probably the leading, factor may be that, by the aid of improved conditions pervading hospitals and improved methods, many limbs can now be preserved which in former days would have been condemned to amputation as the only safe course. Have we not here a striking picture of the progress of surgery and of its results? It now remains to complete the lesson by a consideration of—

III. The Factors which have Rendered Possible such Results and this Enormous Increase in the Number of Operations Justifiable.

First of all came the recognition that the source of nearly every blood-poisoning disease, such as erysipelas, pyæmia, and the like, the curses of surgery, was something introduced from outside, a germ which could be introduced into the body and multiply and produce destructive changes tending to impede repair or to destroy life. The new doctrine, thanks to the labours of Pasteur and Lister, rapidly spread, in spite of non-acceptance and even opposition on the part of some surgeons. The word went forth to fight the germs, which were assumed to be all-pervading—in the atmosphere as well as in wounds. Hence followed—and a valuable step in progress it proved—the "antiseptic" period, when the carbolic spray was used to form a protective atmosphere about the patient and chemicals were used to preserve the dressings and wounds from septic influence. Then came the science of bacteriology which has unmasked for us the natural history and source of the baneful germs and in the case of many of them has taught us where they are to be found and how they are to be excluded; in fact, it has laid the foundation of "aseptic" surgery, which aims at the exclusion of germs rather than at their destruction after they may have gained a foothold.

This, then, is the meaning of the elaboration of design in a modern hospital. Sanitary science has taught us how to keep the air of our wards pure and to secure the most perfect cleanliness. Hence, the polished floors and walls, the corners rounded, the abolition of cornice ledges and of every place where dust, possibly germ-laden, may lodge. This is the meaning of the careful arrangements of the operating theatre; clean washing coats for surgeons and staff; cleanliness of person, of patients, and attendants; sterilisation of water, dressings, swabs, and instruments. These are the means which, aided by the accumulating knowledge and skill of surgery, have led to the astonishing results I have already laid before you.

May we not now take stock of our position. Let us consider where we as medical men stand compared with those early days I have spoken of. In 1852, 54 years ago, sanitary science was a sealed book to nearly every medical man in the kingdom and to nearly every architect and builder, and the sanitary engineer had not arrived. At that time chloroform was the only anæsthetic and was used sparingly and timidly and, under the influence of Dr. Snow, anæsthetist to King's College Hospital, was winning its way into favour. Now anæsthetics are used freely and, thanks to the introduction of ether, can be used for examinations and operations which without anæsthetics would have been out of the question or hardly justifiable. In 1854 came the ophthalmoscope, introduced into the Royal Ophthalmic Hospital, Moorfields, from Germany by the late Dr. Bader. This opened out a world of discovery in ophthalmic science and, thanks to the work of Professor Clifford Allbutt, it has proved a valuable addition to the clinical resources of the physician. As surgery gave the ophthalmoscope to the physician, so in turn the physician gave the clinical thermometer to the surgeon. And here the profession is again under obligation to Clifford Allbutt, who, perceiving the possibilities of clinical thermometry, saw at the same time that the long thermometers in a wooden case carried under the arm would never come into general use and at one stroke rendered every-day use of it practicable by reducing the size to a "pocket edition" and inventing, or procuring the invention of, the recording index. Next came the laryngoscope, at first a sort of toy and looked upon as a fad, but now claiming a special physician, and a full share in the suite of six rooms assigned to the "ear and throat section."

And what shall we say about electricity in all its bearings? At one time the profession looked askance at its votaries, with suspicion as to their scientific aims, and with some doubts as to their perfect honesty. The truth that underlay the imperfect early attempts to utilise its power has gradually commanded the attention of the profession and enlisted earnest scientific workers in its service. And now we find in the instructions to the designer of your new hospital a requirement for a suite of not less than nine rooms to be devoted to radiography, treatment by the x rays and Finsen light, electrical treatment, massage, and gymnastic treatment. Truly these are powers but recently incorporated in the resources of the profession, and new means by which, if used well, wisely, and intelligently, mitigation can be won for the ills of suffering humanity.

My theme has held me so long that time is not left for the consideration of the bearing of all these changes and expansions on medical education. I might have pointed out how much has been done to mitigate the increased demands of expanding knowledge by improved methods of teaching, and by the development of opportunities of practical work, entailing increased cost in time and money on the part of medical schools and students. I might have deplored the increased number and increased stringency of examinations so crippling to the best kind of study and the helplessness hitherto of the authorities in facing and rectifying an excess which is an almost universally acknowledged evil. May I be permitted to conclude this retrospect with the words of one of our greatest men, Sir James Paget, who, in his address to the International Medical Congress in London in 1881, said: "We that can read in memory the history of half a century might look back with shame and deep regret at the imperfections of our early knowledge, if we might not be sure that we held, and sometimes helped onward, the best things that were in their time possible, and that they were necessary steps to the better present, even as the present is to a still better future. Yes—to a far better future; for there is no course of nature more certain than is the upward progress of science. We may seem to move in circles, but they are the circles of a constantly ascending spiral; we may seem to sway from side to side, but it is only as on a steep ascent, which must be climbed by zigzag."

MEDICAL SOCIETY, UNIVERSITY COLLEGE, LONDON.—The first meeting of the current session will be held in the Medical Library, University College, on Wednesday, Oct. 17th, at 8.30 P.M., when a paper will be read by Sir William Gowers, F.R.S., entitled "Immateria Medica." Visitors are cordially invited.

Abstracts
OF
INTRODUCTORY ADDRESSES, ETC.
DELIVERED AT THE
MEDICAL SCHOOLS
AT THE
Opening of the Session 1906-07.

LONDON SCHOOL OF TROPICAL MEDICINE.

INTRODUCTORY ADDRESS BY KENNETH MACLEOD, COLONEL I.M.S., M.D. EDIN., LL.D., HONORARY PHYSICIAN TO H.M. THE KING.

Colonel Macleod said: Nearly three years ago, on Dec. 7th, 1903, an address was delivered in this place by Sir Patrick Manson whom I may without impropriety designate as the Brahma and Vishnu—the creator and sustainer—of the London School of Tropical Medicine. In that address Sir Patrick Manson described the origin, progress, and prospects of the institution and indicated its objects, achievements, and requirements. The school, which was opened on Oct. 3rd, 1899, had then completed the fourth year of its existence. During the three years which have elapsed since that address was delivered the school has continued to prosper. The aggregate of students who have attended during 21 sessions has increased to 617. Of this number 235 belonged to the colonial medical service, for the benefit of which and for the benefit of the colonies in which its members were destined to serve the school was originally designed and organised, under the administration and personal initiative of that great Colonial Minister, the Right Honourable Joseph Chamberlain; 18 medical men employed by the Foreign Office, 29 officers of the Indian Medical Service, 7 of the Royal Army Medical Corps, 4 of the Royal Naval Medical Service, 1 of the Indian Civil Veterinary Department, and 33 medical officers serving under other Governments have passed through the school, making a total of 327, or 53 per cent. of the whole; 71 medical missionaries and 219 private students, or 290 non officials (47 per cent) have availed themselves of the opportunities of studying tropical diseases afforded by the school. The large proportion of non-official students fully confirms the wisdom of the founders of the school in extending its benefits to all medical men, and I may add women (for the aggregate includes 40 ladies), interested in tropical diseases and mostly intending to practise in the tropics. The demand for admission into the school has been well maintained, and a specially satisfactory feature in the statistics of attendance is that the number of students taking the full course of three months is on the increase. The status of the school has been strengthened by its affiliation with the University of London and the admission of tropical medicine as a sixth alternative subject for the M.D. of that University. The school course has also been recognised as entitling students to undergo examination for the Cambridge Diploma of Tropical Medicine and Hygiene. Special arrangements have been made for instruction with reference to the examination for the London degree and Cambridge diploma. 32 students of the school have succeeded in obtaining this diploma and one student has gained the London M.D.

Recently, under the guidance of Sir Patrick Manson, I visited this institution—hospital and school—as it now exists. The hospital has been enlarged and can accommodate 50 patients. The new wards are spacious, clean, and well ventilated, fitted with every appliance and supplied with every requisite for the treatment of the sick. The school building adjoining the hospital, with its large and well-stocked laboratory, lecture room, museum, and library, is well adapted and provided for the instruction of 40 students; and, in addition to accommodation for the staff provides quarters for 12 students who are thus enabled to devote the whole of their time to the studies and practical work. The arrangements are well suited to their purpose and reflect credit on all concerned; but they are by no means complete, and the school must be looked upon as in a state of adolescence and immaturity. Effort and money are still necessary to enable it to accomplish all the good which its promoters and well-wishers desire.

It is gratifying to learn that the London School of Tropical Medicine is free of debt and able to pay its way; but in order thoroughly to fulfil its twofold object of education and research the school needs further extension and development. The laboratory is not large enough for present requirements; additions are necessary for special purposes; with the exception of the Craggs scholarship no provision has been made for promoting and supporting research where it can most profitably be carried out—namely, in the tropics; adequate remuneration is not given to lecturers and instructors; and the fees payable by students are high and capable of considerable reduction. For these and other purposes more money is wanted. Sir Patrick Manson, in the address to which I have referred, estimated that £100,000 were required to place the school on a satisfactory and permanent basis. I understand that of this sum about £40,000 have been received. The remaining £60,000 would form an endowment which would expand the operations and enhance the usefulness of the school. Surely the wealthiest city and busiest port in the world may reasonably be expected, when the want is known, to contribute handsomely to the support of an institution the work of which is designed to mitigate the loss of health and life, which interferes so greatly with the industry and commerce of our tropical colonies and dependencies and causes such a waste of time, labour, and money. The wealth of London and of England is largely drawn from the colonies and from the carrying trade connected with them, and any agency or institution which ministers to the promotion of health and prolongation of life and thereby cheapens production, barter, and transport is deserving of encouragement and support. So that motives of benevolence and self-interest combine to advocate the claims of the school to such liberal endowment as to make it worthy of the city and country and thoroughly competent to carry out those objects and operations the aim of which is to benefit humanity and to promote civilisation.

The necessity of special instruction in the diseases of tropical countries does not require argument or proof. As these countries have their peculiar flora and fauna of which no general teaching of botany and zoology or special study of the plants and animals of temperate regions cannot supply a knowledge, so there are in the tropics special manifestations and modifications of disease regarding which pathology and nosology, as taught in the medical schools of this country, afford very little information. The analogy is by no means a strained one, for the pathology of the present day is largely concerned with botany and zoology, and includes a study of vegetable and animal life. This fact has been wisely recognised in the scheme of instruction arranged in this school. Through the liberality of the colonies the subjects of protozoology and helminthology have been added to the curriculum of study—a novel and important departure which merits commendation and imitation. The study of vegetable microbes is included in that of the diseases with which they are associated, but to complete the teaching of parasitology there is one subject which ought to be systematically developed—namely, pathological entomology. Insects, more especially blood-sucking insects, the mosquito and tsetse fly, for example, have been found to fulfil an important function in the conveyance of infective disease and the harbouring and transmission of disease germs, and knowledge on this subject imperatively claims to be imparted and extended. Recent observations indicate that leprosy is spread by insect agency, and cholera, enteric fever, and plague are very probably similarly transmitted, but on these and other cognate points additional light is required. I trust therefore that a pathological entomologist will in the early future be added to the staff of the school.

The trend of modern investigation and thought has forced into the forefront the fascinating subject of comparative pathology, which has followed naturally but somewhat tardily on comparative anatomy and physiology. The researches of recent years, conspicuously as regards tropical diseases, have revealed a community of suffering and a reciprocity of infection and protection between man and the lower animal creation which have invested medical science with fresh interest and endowed it with larger power. In this connexion it is pleasing to note that an agreement has been concluded between the London School of Tropical Medicine and the Royal Veterinary College, Camden Town, by which students of either institution may attend the other, and an interchange of demonstrations has been arranged. The inquiries and experiments which have

made comparative pathology what it is have been beneficial to both man and beast and are capable of becoming more so. The study of comparative pathology is peculiarly needful in the tropics where, under a different environment, life, and conspicuously parasitic life, is more exuberant than in temperate regions and the struggle between the higher and the lower life, between the things and forces that make for development and construction and those that make for decadence and destruction, is more keen and stringent.

The facts and laws of comparative pathology lead up to the higher reaches of transcendental biology and furnish new illustrations of the law of survival of the fittest which the genius of Darwin formularised and his industry so amply exemplified and established. It is important to note, however, that in this struggle the issue depends on circumstances and conditions, and is fortunately subject to the dominance of mind. The survival is not necessarily of the higher organism. In a state of uncontrolled nature the parasite is apt to obtain the mastery, the lower life to flourish at the expense of the higher; and this is specially true of the tropics with their luxuriant vegetation and teeming animal life. There the lower life is rampant and the higher heavily handicapped in the contest. But when the earth is, according to the Divine command, subdued for the use of man, when the primeval forest is cleared, the swamp drained, the desert irrigated, when crops serviceable to man are cultivated, and native races trained to agriculture and commerce, educated and civilised, when ignorance, poverty, and filth are diminished or abolished, the parasite is at a disadvantage, physique and health are improved, and life is prolonged. I see no reason why health should be worse and life shorter in tropical than in temperate latitudes, when the conditions which affect vitality and longevity are properly understood and made the subject of proper control. In a word, what is required in the tropics for healthy existence is reclamation—economic and sanitary—and these should go hand in hand. To this end the efforts of the whole community, not of medical men and sanitarians only, but of every member of the population, are required and sanitary education should be made universal and compulsory. As a step in this direction I am glad to learn that Sir Patrick Manson is preparing a catechism of tropical hygiene which he proposes to place in the hands of persons proceeding to the tropics and make the subject of examination as a condition of service.

The marvellous progress which has taken place during the last quarter of a century in our knowledge of the nature and causation of disease, to which the study of tropical diseases has so materially contributed, has radically revolutionised our notions regarding pathological processes. We have been compelled to widen our view and to devote more attention to the environment. Important as is the study of the host and his environment, hardly less important is that of the parasite and its environment. It is essential now that the life-history of both should be worked out and the conditions affecting both beneficially or prejudicially. Disease is no longer looked upon as a malignant entity but as a mode of salutary resistance to noxæ; and such processes as fever and inflammation are found to be protective and curative in their purpose and effects rather than of themselves deleterious. This view proclaims the supreme importance of a study of the noxæ, as well as of the disturbances of health and function to which they give rise. The matter assumes an intenser interest when we consider that there exist in the animal body materials whose office is to destroy the noxæ—to kill the microbe and to antagonise the poison elaborated by it. The existence of these materials and of their power constitutes a startling instance of that adapted prevision commonly called design which pervades nature, and whose most subtle and conspicuous manifestation is in the working of the human brain. To develop and to strengthen these resistive and curative elements in the animal organisation is one of the chief objects of medical science, if not the chief; and, greatest marvel of all, we are learning to use pathogenic micro-organisms for this purpose, just as in the septic tank system we are employing saprophytic microbes to hasten the return of matter which has ministered to organic life, to inorganic forms, and thus to accelerate the process of decomposition, the intermediate products of which are so liable to be dangerous to health. The preparation of protective and curative vaccines and sera is engaging the attention of our most able and advanced pathologists. Even cancer, which seems to belong to the category of the infective granulomata, is being diligently experimented on from this point of view with results which offer some promise of eventual success. The principle which underlies the great discovery of Jenner is after the lapse of over a century obtaining new and remarkable applications; the familiar formulæ, vis conservatrix naturæ and vis medicatrix naturæ, are undergoing incarnation, and the intuitions of our forefathers are being converted into material facts.

In offering these observations I have, I fear, been wandering among the hazy heights of generalities; but on an occasion such as the present it seems fitting to survey the field of work as a whole—its extent, condition, and capabilities—rather than examine minutely the tilth of some particular portion of it. But the process of generalisation is prone to become, when misused, both misleading and unproductive and is apt to be beguiling. It is so much easier to think out than to work out a problem. No better illustration of this has ever been furnished than in that land of ideals and shams, India, where at one time strange doctrines concerning pandemic waves, aerial conduction and convection and forces cosmic, telluric and climatic, became rampant. But ever since the arrival of the English in India there have been men who investigated the diseases of the country by clinical methods. The names of Johnson, Twining, Annesley, Webb, Martin, Goodeve, Morehead, Carter, and Chevers merit prominent remembrance in this regard. A new era of systematic practical observation was opened by the deputation of Timothy Lewis and David Douglas Cunningham in the year 1870 to investigate cholera by the methods which they had learned in the Army Medical School, Netley, which was an early pioneer in the special study of tropical diseases, and in which, from first to last, clinical and practical systems of study were followed. It is education of this sort that has fitted men like Bruce, Ronald Ross, Leslie, Roberts, Leishman, and Donovan to accomplish work which has revolutionised tropical medicine, and under the stimulating influence of Professor (now Sir) Almroth Wright's instruction, numerous observers, among whom I may specify the names of Lamb, Rogers, Liston, Douglas, Bannerman, Buchanan, Christophers, James, and Greig, are now engaged in fruitful researches in India. Lewis and Cunningham did excellent work in many directions; but the methods which have been instrumental in adding so materially to our knowledge, particularly staining, pure cultivation and animal experimentation, did not come into full use in their time. The Government of India has now responded to the demands of modern medical science and has resolved to establish laboratories for clinical aid and pathological research throughout India. Many of these are already in existence and active operation. The Pasteur Institute at Kasauli has been converted into a central research laboratory under the direction of Lieutenant-Colonel Semple, another disciple of Wright; the King Institute at Guindy, in Madras, under Lieutenant Christophers, is fully fitted for vaccine bacteriological and pathological investigations; the plague research laboratory in Bombay, organised by Haffkine, and Hankin's laboratory at Agra, are available for all kinds of inquiries, and Lingard's laboratory at Muktesar is devoted to similar studies in veterinary pathology. Other institutions of the same kind are being established and in time every large hospital in India will no doubt have its laboratory. Laboratory work has, in short, become absolutely indispensable not only for researches but for routine hospital use.

To those who are about to commence their studies in this school I offer hearty congratulations on the excellent opportunities they possess for fitting themselves for the responsible duties of their future career. You are fortunate in being inheritors of the great accession to our knowledge of tropical pathology and hygiene which recent years have brought. There is hardly a subject which has not undergone illumination. Malaria, cholera, plague, leprosy, yellow fever, Malta fever, filariasis, ankylostomiasis, trypanosomiasis, kala-azar—to catalogue some brilliant examples—have been investigated with diligence and success. Their special causes have been demonstrated and important indications for their prevention and treatment supplied. But, great as have been the triumphs, much work still remains to be done on these and other subjects. The more we know the more we want to know. As the circle of knowledge widens the horizon of ignorance also seems to extend. The etiology of dysentery is still very obscure and the relation of its different forms to hepatic abscess; we are still in ignorance regarding the causation of beri-beri, sprue, dengue, epidemic dropsy, infantile biliary cirrhosis, and many of the infective

granulomata; and the strange terms ponos, goundou, and ainhum require pathogenetic explanation. Why is the native of India relatively immune to the infection of enteric fever? Why do dysentery and beri-beri break out in the lunatic asylums of temperate regions, while the general population remains exempt? What is the relation between hill diarrhœa and sprue, the symptoms of which are almost identical, and between kala-azar and Delhi boil which appear to be caused by the same micro-organism? Why is the embryo of filaria nocturna absent from the blood in elephantiasis, which appears in the great majority of cases to be caused by filarial infection? These are a few exceptions of problems which still await solution. This school has already sent forth many earnest and successful workers among whom Low, Daniels, Castellani, Bentley, Wise, Balfour, and Philip Ross deserve special notice; and the inspiration and training which you will imbibe and undergo here will stimulate and qualify you to follow their footsteps. The assimilation of knowledge is very precious but the acquisition of aptitude for increasing knowledge is much more so. But while discovery and invention are objects of high and laudable ambition, few are gifted with the power of productive original research, and it is very remarkable how meagre are the really permanent contributions to science of even the most gifted. Still it is open to everyone to aid in some manner and measure, however humble, in the building of the temple of medicine. Permit me finally to remind you that the main purpose of your lives as practitioners of the art of medicine, as it is the prime motive and glory of your profession, is to promote the welfare of man—to prevent and to cure disease, to relieve suffering and to prolong life. In striving to accomplish these ends you will earn gratification and gratitude even if you fail to gain fame or fortune.

ST. GEORGE'S HOSPITAL.

INTRODUCTORY ADDRESS BY THE BISHOP OF BRISTOL.

THE Bishop of Bristol congratulated the students on being now face to face with their professional preparation for a career which each year becomes more scientific and therefore more interesting. Speaking to students of a London school, he was specially glad to see the words "University of London" on their notices, for he had been a member of the Royal Commission on the Teaching University and those members of the Commission who were keen on combination and collaboration had hoped much from the possibility of combination of medical schools with the University. In thus becoming part of the University of London the students were indeed entering upon the citizenship of no mean city and he hoped they would have a clear eye to the duties and the responsibilities which that citizenship imposed. In Cambridge he had on three occasions served the office of proctor for periods of two years, an office that helped to keep a man young by his constant contact with young men. It was an office that revealed some dark things but, on the other hand, it showed the brightest side of young life whose allegiance is paid to the idea of true manliness. In London they would not have the advantage of the watchful eye and the occasional fines of a proctor. They would be their own proctors, thrown on the resources of their own manliness for the preservation of order and propriety in their conduct. He urged them always to listen to the promptings of the better side of their composite nature both for their own sakes and for the reputation of their school. It was a curious sequence of events which placed him in the honourable position of addressing his present audience. His only link with the chairman of council who had invited him was an Alpine Club rope. Mr. Dent was president of the Alpine Club for the term 1887–90 and he (the Bishop) was president for the term 1904–07. But the duty thus laid on him entitled him to beg them to take great care of their health, especially by avoiding all extremes. Being himself well over 70 years of age he would beg them to think of the old men they might come to be and how much a life of careful activity would add to the enjoyments of an old man, even at an age when the Psalmist said that all is labour and sorrow. There were two other capacities in which he would say a few words to them. One was that of a patient. He could not help feeling that during illness the visit of a man of wide interests and wide knowledge, a man who could speak thoughtfully on many subjects, was worth very much more than the quinine or the nux vomica which might be prescribed, and for full efficacy there must be in reserve a high moral tone. He wished also, speaking in his capacity as a bishop, to say that the medical profession had this indissoluble link with those who were called to exercise spiritual functions, that the greatest physician of the body the world had ever seen was one and the same with the Eternal Physician of the soul. The works of healing wrought by our Lord were, we are told, instantaneous and sure. Medical men in modern days could perform such works but only in considerable periods of time and not with certainty. It added interest to the Gospel record that many of those works were now performed by man, and it added interest to medical and surgical treatment that, consciously or unconsciously, it copied the example set by our Lord. As to the relation between the two branches, the material and the spiritual, they must be regarded as on parallel lines, each illustrating and illumining the other, but neither affording proof with regard to the other. For himself personally, the material admirably illustrated the spiritual, of course, without providing anything of the nature of proof. Similarly the physician and the surgeon might find that spiritual things admirably illustrated material things.

A CONTRIBUTION TO THE PATHOLOGY OF CHOREA.

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PART I.—INTRODUCTORY.

CHOREA major or Sydenham's chorea has always attracted great interest and for this there are good reasons. In the first place it is one of the most frequent of all nervous disorders; then, again, the lesions are so delicate that they have been frequently overlooked, with the result that chorea has long been grouped among the functional affections; indeed, it is only comparatively recent investigations which are proving that it is an organic condition. Lastly, the intimate association of chorea with rheumatic fever has given rise to much speculation and discussion, for at first sight no conditions seem more unlike one another than a swollen joint or damaged cardiac valve and the curious incoördinate movements of chorea, and yet for years many clinicians have been convinced that there must be one common underlying cause for each of them. In this paper it is our intention to continue that line of investigation which has recently promised to elucidate the pathology of chorea and to bring forward some more facts that we have ascertained in our research. We do not, however, intend upon this occasion to discuss the theories and investigations that have been put forward previously, for already in various papers[1] these have been entered upon at some length.

It is nevertheless necessary for us to define our present position. We believe that the great majority of cases of chorea are rheumatic in nature and hold that when chorea is rheumatic it is a direct result and not a complication of rheumatism. Lastly, we look upon acute rheumatism as the result of an infection by the "diplococcus rheumaticus." We are led to this belief not only by clinical evidence but from experimental investigation. For there is clear and repeated evidence that this micrococcus can be isolated from the most important rheumatic lesions and can produce similar lesions in animals.

Since Wassermann in 1899[2] produced with constancy a polyarthritis in rabbits by the experimental inoculation of a diplococcus that he had isolated from the

[1] Poynton and Paine: The Etiology of Rheumatic Fever, THE LANCET, Sept. 22nd (p. 861) and 29th (p. 932), 1900. Poynton and Paine: Some Further Investigations upon Rheumatic Fever, THE LANCET, May 4th, 1901, p. 1260. Poynton: Clinical Lectures on Rheumatic Fever, Lecture No. III., International Clinics, vol. iv., Series 13. Poynton and Paine: Some Investigations upon the Nervous Manifestations of Acute Rheumatism, THE LANCET, Dec. 16th, 1905, p. 1760.

[2] Berliner Klinische Wochenschrift, 1899, p. 638.

cerebro-spinal fluid and inflammatory exudations of a patient dead from acute rheumatism and chorea, that line of investigation upon the pathology of chorea has made considerable progress. Thus, in 1900 Poynton and Paine confirmed the observation of Wassermann and further demonstrated a diplococcus in the pia mater and brain of a fatal case of chorea. In that year they also found that incoördinate movements might result from an intravenous inoculation of the diplococcus into a rabbit. This in turn was confirmed by Meyer[3] and Beattie.[4] In THE LANCET of Dec. 16th, 1905, Poynton and Paine published an investigation illustrated by plates showing the micro-organism in the pia mater of a case of fatal chorea and reported another case in which they had again succeeded in demonstrating its presence. From one of these the diplococcus had been isolated from the cerebro-spinal fluid and had produced arthritis, endocarditis, and pericarditis in rabbits.

As a result of these various investigations, then, we have at the present time this hypothesis to work upon, that rheumatic chorea is probably the outcome of an infection of the brain and its meninges with the diplococcus rheumaticus; that it is, in the words of Sir Dyce Duckworth, a "cerebral rheumatism." This position once gained we are much aided in further inquiry by a study of other rheumatic lesions and among them especially those that affect the heart. These are so much more frequently fatal than chorea that it is a comparatively easy task to study the rheumatic processes in them and by the experience thus gained to get hints as to the probable nature of the changes to be expected in chorea. Thus it is apparent that the micrococci will be carried in the blood stream to the nervous system and that if they escape from the blood capillaries they will first pass out into the perivascular spaces and connective tissue around the vessels. When they have reached these tissues two series of lesions are to be expected, those produced locally by the diplococci in the connective tissues—with these we must associate the vascular changes—and those produced by the action of the bacterial rheumatic poisons upon the nervous tissue.

In other rheumatic lesions the swollen condition of the affected connective tissues, the great vascular hyperæmia, the capillary hæmorrhages, and the leucocytic infiltrations are all very apparent. In the majority of these lesions also if the investigator is fortunate the bacterial agent will be discovered, although it is rapidly taken up and destroyed by the leucocytes and living cells of the tissues, and on account of its minute size requires careful search. The connective tissue changes are hardly likely to be prominent in the brain, for this is essentially composed of nervous elements and a special supporting tissue—the neuroglia. Nevertheless, in other organs where there is a connective tissue basis holding together the functional tissue the evidence of the rheumatic poison can be traced not only in the former but also in the functional tissue. In the myocardium, for example, there may be found profound degeneration of the muscle fibres. Thus in these investigations upon chorea we have useful guides provided as to the possible nature and position of the organic lesion if such exist.

PART II.—THE INVESTIGATION.

In the present investigation we are, firstly, adding three more to the recorded observations of the presence of a diplococcus in the pia mater of cases that have proved fatal while suffering from chorea. In addition, this micro-organism has been demonstrated in the brains of these cases lying in the perivascular spaces and connective tissue. Secondly, we have also studied by the most recent methods the two series of changes—viz., those affecting the connective and vascular tissues and those which occur in the nervous tissues in chorea. And, lastly, we have demonstrated that in a case of chorea which occurred in a first pregnancy lesions were present similar to those that were found in the rheumatic cases. Such opportunities could never have offered themselves if it had not been for the kindness of Sir Cooper Perry and Dr. H. S. French, Dr. J. Rose Bradford and Dr. H. Batty Shaw, and we are greatly indebted to them for the pathological material and permission to use the clinical and post-mortem notes of these cases. Deaths from chorea are so rare that the opportunities for testing the results in more than single cases at short intervals are most exceptional, but through their kindness these three cases came to us within a month and gave us an opportunity of repeating and comparing our observations.

[3] A paper read before the meeting of the Gesellschaft für Innere Medicin, Berlin, 1901.

[4] Beattie: Brit. Med. Jour., December, 1904.

The Clinical Cases.

CASE 1.—Our first case, for which we are indebted to Dr. Shaw, was that of a girl, aged seven years, who was admitted to the children's ward at University College Hospital on March 25th, 1906. Her illness had commenced three weeks previously with multiple arthritis, ushered in with acute malaise and vomiting. After a temporary improvement chorea and pericarditis developed, and when admitted her condition was hopeless. Death occurred two days later from heart failure, the chorea having lasted about 17 days. While under observation the temperature ranged between 104° and 99° F., the chorea was very severe, the pericarditis was general, and valvular disease was also present. In her previous history there was a record of an attack of rheumatic fever at five years of age. The post-mortem examination showed general and recent pericarditis, bilateral pleurisy, mitral endocarditis, and myocarditis.

This case was one of extreme severity and illustrates a difficulty that has to be reckoned with in studying chorea. During the last week of life blebs full of serous fluid developed upon the back and elsewhere and the incessant movements rapidly converted them into open sores. An occurrence such as this must, we readily admit, introduce the question of secondary infection and increase the difficulties of an accurate interpretation of any results. For our own part we are sceptical that, under these conditions, a secondary infection will explain the results of post-mortem investigation, because it has been repeatedly demonstrated that in acute rheumatism similar bacteriological results to those we obtained on this occasion can be shown when there is no question at all of open sores.

There is yet another point of interest about this case. Some eminent bacteriologists dispute any direct association between the diplococcus and acute rheumatism and some have failed to find the micrococcus after repeated search in cases of rheumatism. In this case, however, a pure growth of a diplococcus was obtained from the heart's blood by Dr. F. H. Thiele, clinical pathologist to University College Hospital. Its presence was demonstrated in the pericardium by Dr. T. Lewis, the house physician to the case. It was again demonstrated by one of us in the pia mater and by another in the brain, and was cultivated by Dr. Paine, and on experimental injection into animals produced multiple arthritis and pericarditis of the usual type. It will be seen, then, that five different observers independently recognised the occurrence of a diplococcus in this case, which had the features of the diplococcus described in rheumatism.

Pathological investigation.—Only the right half of the brain, brain-stem, and cerebellum and a portion of the diseased heart valve were received for examination. *Macroscopical examination.*—The vessels of the meninges and cortex of the hemisphere, and to a less extent those of the membranes on the base of the brain and brain-stem, were very much engorged. No exudation or signs of inflammation were visible to the naked eye, but several small subpial hæmorrhages could be seen on the convexity of the hemisphere. *Microscopical examination.*—Sections stained with hæmatoxylin revealed great congestion of the blood-vessels of the membranes and of the brain itself, and in many places small hæmorrhages were visible, especially on the under surface of the pia mater. A small proportion of the vessels of the pia-arachnoid, generally the smaller arteries, were thrombosed, especially over the convexity of the hemisphere, and there was in places definite evidence of serous exudation and small round cell infiltration into the membranes in the immediate neighbourhood of the vessels. Thrombosed vessels were still more common in the cortex and subcortical white matter, but in the majority the clots seemed to be quite recent, though some were partially organised. Thrombosed vessels could be occasionally followed into, or found within, small patches of softening, which lay most frequently in the deeper layers of the cortex. The destruction of tissue within them was never complete; there was considerable serous exudation into the recent ones, while the older were marked by proliferation of neuroglial nuclei and sclerosis. There was also small round cell infiltration into the sheaths and perivascular spaces of many

of the vessels which were not thrombosed and a polymorphonuclear leucocyte was occasionally seen among them (Fig. 1). These changes were equally marked over the whole hemisphere and within the basal ganglia, but no foci of necrosis were observed in the cerebellum, pons, or medulla, though here, too, there was considerable congestion of the vessels and frequently small round cell infiltration into their sheaths.

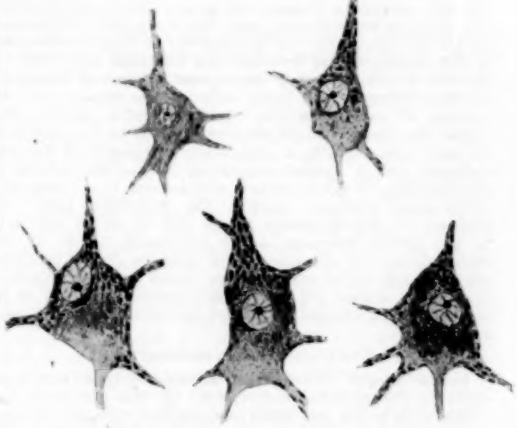
FIG. 1.

Reproduction of a micro-photograph showing small round cell infiltration into the sheath and perivascular space of a vessel in the subcortical white matter.

When the brain was examined by Nissl's method definite cell changes were found, which were greater in the cerebral cortex than in any other part of the central nervous system. Practically all the cortical cells were affected; as a rule they were swollen and distended, their tigroid had partly disappeared so that they stained diffusely or occasionally almost uniformly, and their nuclei, which were swollen and excentrically situated in a certain number of the cells, stained more deeply than normal. (Fig. 2.) The nucleoli appeared unaltered and the cell processes seemed normal except that they were not easily visible owing to diminution of their chromatophilic substance. The degree of affection of the large Betz cells was very variable. In the majority there was only slight chromatolysis immediately around the nucleus where the Nissl bodies were broken up into a deeply staining granular material, while they remained normal in the periphery of the cell and in the dendrites. In the next stage there was more extensive perinuclear chromatolysis and the nuclei were more generally swollen and more frequently excentric. A small number of cells were still more severely affected; their outlines were scarcely recognisable, their nuclei were shrunken and deformed, and no stainable substance was visible in them. The cells of the basal ganglia were less affected; there was at the most only evidence of commencing chromatolysis and slight swelling of the nuclei. The cells of the different portions of the brain-stem were in much the same state; they stained rather faintly and there was commencing disintegration of their tigroid masses. No definite changes were recognised in the cells of the cerebellum. Various portions of the forebrain and brain-stem were treated by Marchi's method. A few degenerated fibres were found on the borders and neighbourhood of the small patches of softening, but there was otherwise no evidence of disease in the cortex except in the presence of dark granular masses in the perivascular spaces or in the walls of the blood-vessels, which probably represented the process of removal of some degeneration products.

Bacteriological examination.—Thin films of pia mater were stripped off the brain, fixed on slides, and hardened in alcohol. They were then stained by Löffler's methylene blue and examined under an oil immersion lens. In other places the pia mater was cut along with the brain it covered in paraffin and stained by the same method. On careful search bacteria were found in the pia mater; the majority appeared as isolated diplococci of small size, but frequently larger groups of micrococci, many of which lay in pairs, were visible, and occasionally a single micrococcus was also seen. The morphological characters of the micrococci were in every place the same; they were remarkably small on the whole but rather irregular in size. No other bacteria were found in the meninges. Similar diplococci were found in sections of the brain which had been cut in paraffin and stained in the same way. They were seen, however, only in the loose connective tissue surrounding the vessels and in the perivascular spaces; despite careful search none were discovered in the brain tissue. Their presence did not seem to bear any relation to the intensity of the vascular changes or to the presence of thrombosis, but infiltration by small round cells, evidently of vascular origin, was generally visible in their neighbourhood both in the meninges and in the brain. Groups of similar micrococci were found in the ulcerated heart valve. Here they generally lay in groups in which the diplococcus arrangement was easily visible, most frequently at the junction of the necrotic and inflammatory tissue, but in places they extended to the surface of the ulcers or vegetations. Similar diplococci were present in the inflammatory tissue in the pericardium. Morphologically these micrococci seemed identical with those found in the meninges. Dr. Paine kindly investigated for us the cultures obtained by Dr. Thiele from the blood in the left ventricle and found that intravenous injection into the auricular veins of rabbits produced arthritis and pericarditis.

FIG. 2.



Two large pyramidal cells and three Betz cells from the precentral convolution of Case 1, showing various degrees of chromatolysis.

CASE 2.—The second case, a boy, aged 14 years, was admitted to University College Hospital, under the care of Dr. Bradford, on May 8th, 1906. He had been ill for two months and in his past history there was a record of several attacks of subacute rheumatism. The first symptoms of the present illness began with pains all over the body, and for some weeks before admission he had developed præcordial pain, cough, and dyspnœa. His condition was critical. On admission the temperature was 102° F., the pulse-rate was 120, and the respiration was 28 to the minute. The heart was rapid and excited, with a loud apical systolic murmur. There were crepitations at the bases of both lungs and the mental state was dull. After he had been a few days in the hospital the excited action of the heart suggested pericarditis in spite of the fact that there was no pericardial friction. In addition, patches of pneumonia had now developed. On

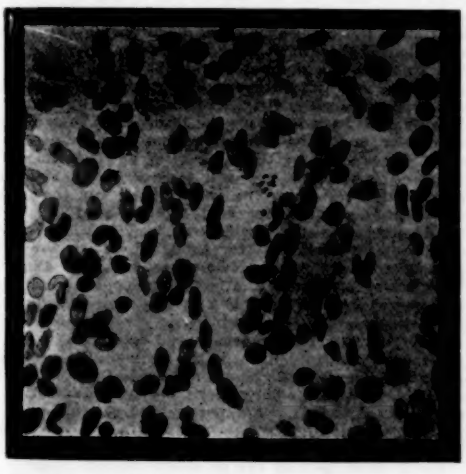
the 13th the boy was actively delirious and chorea commenced and rapidly became violent. Death occurred on the nineteenth day, the temperature to the end never becoming hyperpyrexial. This case is of exceptional value because the chorea developed under observation.

The necropsy showed that there was recent pericarditis over the posterior surface of the heart. The pericardium was adherent over the front and there was recent endocarditis of the mitral and tricuspid valves. The lungs were in a condition of acute œdema.

Pathological investigation.—Only the brain and brain-stem were received. Examination revealed a condition so similar to that of Case 1 that but little additional description is needed. *Macroscopical examination.*—To the naked eye the state of the brain was identical with that of Case 1. There were a similar engorgement of the vessels and subpial hæmorrhages. *Microscopical examination.*—As in the previous case, the engorgement of the vessels was a very prominent feature in sections of the membranes and brain. Very few of the vessels were, however, thrombosed and only two small and incomplete patches of softening were found though a large number of sections were examined. Many of the vessels contained large masses of leucocytes and there was in places considerable œdema in the perivascular spaces and the brain tissue around them. In this case, on the other hand, there was more cellular infiltration into the meninges and into the sheaths and perivascular spaces of the cerebral vessels. The use of Nissl's method revealed similar changes in the nerve cells, greatest in the cortex, and approximately equal in all its regions. In this case, too, the nerve cells of the basal ganglia and brain-stem were less affected than the cortical cells. No degenerated medullated fibres were made visible by Marchi's method, but irregular masses, which stained dark by osmic acid, similar to those in Case 1, were found in the perivascular spaces of the brain.

Bacteriological examination.—The examination was conducted in the same way as in Case 1 and yielded similar results. The diplococci were, however, more numerous in the meninges of this case (Fig. 3) and groups of similar

FIG. 3.



A film of pia mater showing the presence of two groups of diplococci. (From Case 2.)

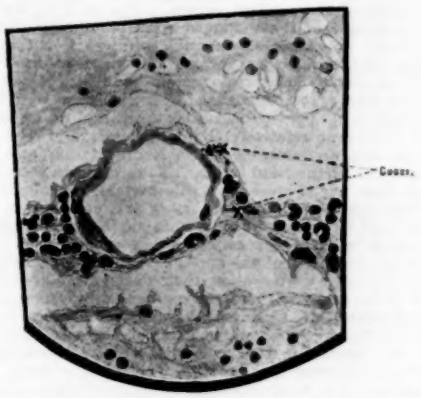
micrococci were easily found in the adventitial sheaths and perivascular spaces of the brain. (Fig. 4.) Neither the heart valves nor pericardium were received for examination.

CASE 3.—For the third case we are indebted to the kindness of Sir Cooper Perry and Dr. French. This was a case of chorea occurring in a first pregnancy without a previous history of chorea or rheumatism. It is clear that the interpretation of any of the results that we have obtained in this case must be made with minds alive to possible fallacies. We shall on this account plainly state that the results are put on record as facts observed in a single case only and the interpretation put upon these facts is left open to free criticism. The history of the case was published by Dr. French and Mr. H. T. Hicks[1] and is as follows.

"R. D., aged 21, had been married four months and was pregnant at the second month for the first time.

History.—She had had no previous chorea nor acute rheumatism. The present chorea began at the second week of pregnancy. The movements were slight at first and got worse gradually. On admission she was so violent and noisy that she had to be taken to the strong room. Nasal feeding was resorted to, the choreic movements being controlled by chloroform. She was emaciated. There was no bruit.

FIG. 4.



From the cerebral cortex of Case 2, showing the presence of diplococci in, and cell infiltration of, the adventitial sheath of a vessel.

Result.—The uterus was evacuated after rapid dilatation under chloroform; the patient seemed quieter next day. The chorea ceased but the patient became collapsed and died on the fifth day after the uterus was emptied.

Autopsy.—There were recent vegetations all along the mitral valve; there were no infarcts. Cultivations of the heart blood showed bacillus coli communis only. Cultivations from the spleen remained sterile after incubation for three days at 37° C."

A most interesting feature in this case, which, as we have just pointed out, gave no personal history of rheumatism, was the condition of the mitral valve. This valve showed a row of early vegetations which were indistinguishable from those on the valve of the first child that resulted from an obvious and exceedingly active attack of acute rheumatism. These two valves were sent to us in the same week, and their resemblance was most striking; nor did the resemblance cease here, for on section we found that the valve from the case in which there was no personal history of rheumatism and the valve from the active rheumatism both contained diplococci similar in appearance and distribution, and both showed tissue changes of similar nature.

Pathological investigation.—Only the brain and brain-stem and portions of the ulcerated cardiac valves were obtained. *Macroscopical examination.*—To the naked eye the brain was similar to that of the other two cases, but there was less vascular engorgement. *Microscopical examination.*—Vascular engorgement of the brain and its membranes was also a prominent feature in this case, but only very few thrombosed vessels could be found and in all these the clots appeared to be quite recent. None were fully organised and there were no such changes in their intima as would have resulted from long occlusion. No definite patches of softening were found, though around some of the thrombosed vessels the brain tissue was slightly necrosed and infiltrated by serum. There was also here less small round cell infiltration into the walls and perivascular spaces of the cerebral vessels, though in places it was quite marked.

While the changes in the vascular system were less in degree, though similar in kind, in this case than in the two above described, the affection in the nerve cells was considerably greater. In scarcely one of the cortical cells was tigroid

[1] Practitioner, August, 1906.

visible in the form of ordinary Nissl bodies; the protoplasm stained diffusely or almost uniformly and generally darker than normal. The nuclei were definitely enlarged, especially those of the large pyramidal cells and the Betz cells, but the nuclear chromatin remained as a rule easily visible in a pale ground and apparently unaltered. In other cells, however, the nuclei retained so much stain as to make them appear dark and almost homogeneous; these nuclei were often smaller than normal and occasionally irregular in shape. In some cells, especially in the Betz cells, the nuclei were excentric, but in the majority they remained central. No pathological changes were observed in the nucleoli. Some of the affected cells, especially the larger ones, were considerably shrunken. These changes were equally marked in all parts of the cerebral cortex. The cells of the corpus striatum and of the thalamus were practically identically affected; no absolutely normal cell was found in them. Some were considerably swollen and all stained so diffusely that no clumps of tigroid could be distinguished either within them or their dendrites. The cell changes were less pronounced in the pons and medulla; the cells of the motor nuclei had undergone relatively slight tigrolysis and had merely a punctate appearance, due to fragmentation and partial absorption of the Nissl bodies. None of them were swollen and their nuclei were as a rule normal. The cells of the sensory nuclei and of the rest of the grey matter of the pons and medulla were somewhat similarly affected. The Purkinje cells of the cerebellum were only very slightly affected, but those of the nucleus dentatus had suffered more severely; they were swollen, their nuclei often lay excentric, and in the majority there was complete disappearance of the Nissl bodies. No degenerated fibres were found on examination by Marchi's method, but many of the medullated fibres of the forebrain were coloured a faint brownish tint, probably representing a slight chemical change in the myeline. The same evidence of degeneration products was visible in the perivascular spaces and vessel walls as in the other two cases.

Bacteriological examination.—Micrococci, generally lying as diplococci and identical in appearance with those

FIG. 5.

Showing the presence of diplococci in the diseased heart valve of Case 3.

described in Cases 1 and 2, were found after careful searching in the pia mater of the forebrain and in the walls of the cerebral vessels. They were rather rare in the portions of tissue examined, but quite as numerous as in Case 1. Similar diplococci were also found in the diseased heart valve, in the same position as in Case 1. (Fig. 5.)

PART III.—THE PATHOLOGY OF CHOREA.

It now remains to interpret the results that were obtained in these three cases: firstly, in their bearing upon the nature of chorea; and, secondly, with reference to the relationship of chorea and rheumatism.

I. *The nature of chorea.*—In considering the changes described as the anatomical substratum of chorea we are unhappily limited by the fact that in none of the three cases was the spinal cord obtained for examination. Yet this restriction is not serious, for though definite pathological changes would probably have been found there, as in every other part of the central nervous system, it would be impossible to assume that the cord played any great part in the production of the choreal movements. For, quite apart from the distribution of the movements, their nature makes it highly improbable that they arise in the spinal cord. To quote Dr. J. Hughlings Jackson, "these movements are not mere spasms and cramps, but an aimless profusion of movements, of considerable complexity, much nearer the purposive movements of health,"[6] and therefore "it is certain that the part diseased serves in highly special and complex coördinations, and that thus it is a part very high up in the nervous system."[7]

The study of the central nervous system has shown that the pathological changes which form the morbid anatomy of the disease are composed of (1) vascular and inflammatory changes in the central nervous system and its membranes; and (2) changes in the nervous tissue itself, consisting of destructive lesions secondary to the vascular changes and of alterations in the morphological characters of the nerve cells.

The most prominent vascular change in all three cases was the great hyperæmia of all parts of the brain and the presence of thrombosed vessels; the latter were rather numerous in Case 1 but more rarely seen in Cases 2 and 3. Whether the thrombi were primary or secondary to embolism is impossible to say, but no emboli were seen in the sections which were studied. In Case 1 patches of softening were found associated with, and evidently a result of, these vascular occlusions, but they were very infrequent and rarely pronounced in degree in Cases 2 and 3. But more constant in all three cases was the evidence of inflammatory reaction shown by the presence of perivascular small round cell infiltration and serous exudation around the vessels. The consideration of these changes is interesting in relation to the theory of Kirkes, which was supported by Hughlings Jackson[8] and Broadbent,[9] that they are the etiological factors of the choreal movements. According to Dr. Hughlings Jackson it is apparent that the disorder of function must arise from instability and overaction of the nerve tissue, which he explains by the increase of nutrition due to the collateral hyperæmia that results from vascular occlusion by embolism, assuming, of course, that only the smallest vessels are occluded. Ingenious though this theory is, it is hardly acceptable on the evidences afforded by the investigation of our three cases, for though hyperæmia was very pronounced there was, in two of the cases at least, very little evidence of embolism on microscopical examination. It seems to us that there is a more definite reason for the congestion of the vessels which we shall consider below. Further, in view of the pronounced cell changes and the presence of micro-organisms in the brain and its membranes, other possible factors must be considered. The foci of necrosis, we would add, may be neglected in seeking the causal agent, as they are purely destructive lesions and cannot, therefore, *directly* produce active or positive symptoms.

As the nerve cells of one or several regions must be the direct agent in production of the movements the changes found in them are important and claim our first consideration. At first the question arises, What is the significance of these changes? Under what conditions are they known to develop? The changes are those described by the term chromatolysis; they consist of partial solution of the stainable substance of the cell and slight alteration in the appearance or even position of the cell nucleus; in some of the cortical cells, especially in Case 3, the changes had advanced further, and both the bodies and nuclei of the cells stained deeply and homogeneously as though they had undergone

[6] Edinburgh Medical Journal, vol. xiv., 1868.
[7] Medical Times and Gazette, 1875.
[8] Ibid., 1869.
[9] Ibid., 1875.

coagulation necrosis. These changes represent a vital reaction of the cell to some abnormal influence. It is known that chromatolysis is found in cells which have been subjected to overwork, but the possibility of over-activity being the cause in these cases may be at once rejected, for the cell changes were universal throughout the brain and brain-stem, that is, they occurred in some groups of cells which it is groundless to assume were over-active. In the cells of the motor area, however, and especially in the Betz cells, over-activity may have had a part in the pathogenesis of the changes. They were certainly not the result of pyrexia, for the pyrexia in these cases was not considerable, with the exception of the last few days of life in the case of chorea of pregnancy.

The assumption that the changes described are due to the action of bacterial toxins, on the other hand, is suggested by the frequent association of chorea with the undoubtedly infective condition known as rheumatism, and by the discovery of micro-organisms in the central nervous and vascular systems, both by ourselves and other workers. This view is compatible with the results of examination of the nerve cells in other infective diseases—e.g., diphtheria, typhoid fever, and septicæmia, where analogous changes have been found (Babes, Marinesco, and others). The assumption of a bacterial toxin (whether specific or not matters not) explains also the local vascular disturbances, which may be regarded as a reaction to its presence, and the presence of degeneration products in the walls of the vessels and the evidence of the slight chemical change revealed by Marchi's method in the medullated fibres of Case 3.

If it is accepted that the action of a toxin is the immediate agent in the causation of choreal movements the question then naturally arises, If chorea is cerebral rheumatism in the sense that it is produced by the same bacterial poisons which give rise to the symptoms of ordinary acute rheumatism, is it necessary that there should be infection of the brain and its membranes by the bacteria, or is it sufficient that the toxins should be carried by the blood and lymph from some other seat of manufacture? It does not seem possible to give an absolute answer to this question, though the presence of bacteria in the brains of the three cases we have examined suggests that its affection depends on the direct invasion of it by the bacteria. The occurrence of hemichorea also makes a local infection probable, as unilateral symptoms can be scarcely attributed to a general infection; it is also supported by the previous demonstration of the diplococcus rheumaticus in all the other important lesions it produces. On the other hand, it must be borne in mind that it has been shown by Laignel-Lavastine that similar changes in the brain cells may be the result of tuberculous toxæmia without bacterial infection of the brain, and Babes and others have found similar cell changes after the experimental injection of toxins alone. The examination of a series of brains from cases of acute rheumatism without cerebral symptoms will be necessary to decide this point.

It now remains to attempt an explanation of the production of chorea by these toxins, whether produced locally or circulating in the blood and lymph. Here we have to deal with the little-understood physiology of the nerve cell and our arguments are consequently more or less limited to analogy. Thus, it is well known that symptoms of instability and over-action of the nerve cells, analogous, if not similar, to those of chorea, may result from the action of the toxin of tetanus and that similar excess of movement is produced by strychnine. Nor does the possible analogy end here. The excess of activity produced by strychnine, and perhaps, too, by tetanus, may be followed by paralysis of the concerned movements, presumably due to exhaustion of the nervous centres, and it is possible that some of the choreal palsy may be due to a similar exhaustion of the active centres, although it seems to us more probable that the palsy of movement so frequently seen in chorea is a direct effect of toxic action. It is conceivable that the same toxin which produces symptoms of excitation may, when acting in greater concentration or more rapidly, paralyse the functions of the cells. Such a reversal of action is seen on the administration of morphine or chloroform; small doses acting for a short time produce excitation, while in larger amount they annul the functions of the previously excited centres. This toxin, though probably specific in the sense that it is constantly the product of a single variety of bacteria, has certainly no special action on any part of the central nervous system in the sense that it affects these and spares the others, for both the vascular and nerve cell changes were found in every region of the brain and brain-stem. The explanation of the predominant affection of the motor system in chorea is probably that its symptoms are always the most apparent and that it is the system which reacts most easily to excitation. But chorea is not composed of one symptom alone, there may be in addition positive or negative symptoms of speech, sensation, and even of the highest psychical state. The anatomical basis of such disturbances of function is represented by the changes described in the nerve cells in the different parts of the brain.

The aim of this paper is such that it is not necessary to commit ourselves to a definite expression of opinion as to the disturbance of what portion of the nervous system yields the predominant symptom of chorea. It has been assumed, though often only tacitly, by the majority of authors that the higher motor centres are concerned and it has therefore been placed in the cerebral cortex, or, in the prelocalisation days, in the corpus striatum. As Dr. Hughlings Jackson has so clearly shown, the nature and distribution of the movements, as well as the general physiology of the disease, confirm this view, but the pathological changes are so general and widespread throughout the whole central nervous system that they can neither support nor contradict any theory of localisation.

II. *Chorea and rheumatism.*—We are thus lead by this study to the conclusion that the causation of chorea is to be found in the action of bacterial poisons on the brain. Further, the available evidence points to the occurrence of a local infection to which the widespread changes in the nervous system are due. Finally, we believe that this infection is of a rheumatic nature; it is, then, necessary to see how far it is possible to correlate this conclusion with the association of chorea and rheumatism.

The first point in this consideration is the frequency of the association of chorea and rheumatic fever. This is explained by looking upon chorea in the rheumatic as a symptom of rheumatic infection and by regarding the "diplococcus rheumaticus" as the cause. This, too, explains the clinical truth that chorea may be the first evidence of acute rheumatism or be one of many coincident manifestations or be a late episode of the disease. Which of these events may happen will depend upon the date at which the cerebral infection occurs. If we accept the undoubted fact that chorea may be the first symptom of acute rheumatism we are at once confronted with the question whether or not chorea is invariably a manifestation of acute rheumatism. It will be a distinct advance in our knowledge when the answer to this is finally settled. The difficulty is apparent and turns upon the doubt as to whether such movements and such cerebral disturbance as we see in chorea can be produced by more than one agent. At the present time there is evidence upon both sides but the bulk of it strongly favours the view that chorea is mostly rheumatic and that when chorea occurs without any history of rheumatism it is presumably the primary rheumatic symptom and in practical medicine is best looked upon as a stamp of rheumatism.

The tendency for chorea to relapse or to occur several times in the life of an individual is explained in precisely the same way as the relapses and recurrences of rheumatic heart disease and arthritis; that is to say, either there is a fresh outburst of a slumbering infection or a fresh infection has occurred. The onset of chorea is not unlike the onset of the other rheumatic manifestations, for, as with these, it may be gradual, subacute or acute. If the infection is slow in making itself felt, and yet eventually succeeds, then the course of the chorea is slow. The acute cases, on the other hand, recover more rapidly. Should chorea arise while the patient is under observation this sequence of events is observed whatever method of treatment is adopted, the stage of onset, the stage of the developed disease, and, lastly, the stage of retrogression. This is the course that we notice in all infections that cannot be cut short by some specific remedy.

When chorea follows acute arthritic or cardiac rheumatism the cerebral infection may date from the original one, and have remained latent for some time, for there is no doubt that chorea may smoulder on for weeks without distinctly declaring itself. In other cases an entirely new infection may have occurred, which this time has attacked the brain. Lastly, the cerebral infection may be metastatic, in the sense that it has arisen after the original attack of acute rheumatism by a metastasis from a focus of infection elsewhere, which itself was the result of the original attack; this focus may

be situated, for instance, in the heart or in the joints. As Vernon Shaw has demonstrated in animals, a primary focus in a joint, produced by a local injection of the diplococcus, may be followed by the appearance of pericarditis. Chorea is thus very reasonably explained both as the first symptom and the last of acute rheumatism, and when it occurs simultaneously with arthritis and endocarditis it is clearly part of a widespread infection. The complete recovery that so frequently occurs in chorea is not infrequently brought forward as an argument against its rheumatic origin. It is, however, clear that acute rheumatism is a disease to which there is great resistance, for it is rarely fatal; and it is also evident that the various tissues resist the poisons with different degrees of success. The heart often recovers partially but is usually maimed; the joints often recover completely, pleurisy generally leaves adhesions, but the subcutaneous nodules and cutaneous eruptions disappear. The renal inflammation, again, is usually transitory. Chorea is to be grouped among the more transitory of the rheumatic lesions, for although there is no doubt that some cases may last for many years the anatomical lesions are clearly recoverable as shown from the pathological changes in these cases.

At this point we would make passing allusions to the probability that even more delicate changes occur in the nervous system as the result of rheumatism. Clinical observers have pointed out that rheumatic children are singularly nervous and emotional and there is no doubt that a child's nature may be greatly changed by an attack of rheumatism, particularly if this should be of the cerebral type. To our knowledge parents have volunteered this statement where examination has shown that no cardiac lesion has been left behind and the active attack of rheumatism has certainly subsided. It is possible that such psychical alterations are the result of organic changes of an even more delicate nature than those met with in chorea.

A difficulty which attends the complete explanation of other infective processes which affect the brain is equally present with chorea. We cannot say why in some cases the brain suffers and in others it does not. The well-known importance attached to fright in the etiology of chorea has close bearing upon this difficulty, for overstrain of any system tends to lower its vitality and in the case of the nervous centres, whether that overstrain be abrupt, as in fright, or chronic, as in the strain of school-work or mental anxiety, the lowering of the vitality is a predisposing cause for the rheumatic infection to gain a foothold.

PART IV.—CHOREA AND PREGNANCY.

The third case in which chorea was associated with pregnancy raises two questions of importance. Firstly, whether this chorea is a rheumatic chorea intensified by the condition, and secondly, a far wider one concerned with the influence of pregnancy and the puerperal state upon the rheumatic infection. Chorea in pregnancy is probably a rheumatic chorea. We get support for this statement from the clinical observations of others upon the association of rheumatism and chorea in pregnancy. Thus in a recent paper by Wall and Russell Andrews[10] Buist's statistics are quoted, who found that in 226 cases of chorea in pregnancy 45 gave a previous history of rheumatism and 66 a previous history of chorea. From their own observations they found that in 23 out of 37 cases of chorea in pregnancy there was a previous history of chorea and in 16 out of 37 a previous history of rheumatism. Still more recent and equally convincing evidence is furnished in a paper by Dr. Herbert S. French and Mr. H. T. Hicks.[11] Here 29 consecutive cases of chorea gravidarum were reviewed from the records of Guy's Hospital and in no fewer than 19 of these there was a previous history of rheumatism or chorea and 15 of these 19 had suffered from chorea before marriage. As a result of their investigations these authors add: "This is so large a proportion of the whole that we feel convinced that chorea gravidarum and infantile chorea have a similar pathology." This single case of ours strengthens the position to this extent, that it has enabled us to show the presence of a diplococcus in the nervous system and heart valves and to demonstrate that the morbid changes in the brain are essentially similar to those in rheumatic chorea. Further, the mother of the patient was at the same time in Guy's Hospital suffering from recurrent ascites due to heart disease. There are, then, the chorea, the condition of endocarditis of the mitral valve described above, and the nature of the mother's illness, which legitimately suggest that this woman was suffering from a rheumatic chorea. It will not be forgotten that in childhood chorea may be the only evidence of rheumatism, and it is difficult not to believe that when in a case of chorea we search for a history of rheumatism we may often be in the position of one searching for a history of tuberculosis in a patient suffering from tubercular meningitis. We are, in fact, looking for evidence of a disease with that evidence staring us in the face. It is also becoming increasingly apparent that the most frequent cause of chorea in pregnancy is, in all probability, a rheumatic infection. Two cases under the care of one of us are worth mention in this context. One of these while a child was a patient in the Hospital for Sick Children, Great Ormond-street, with chorea and rheumatic endocarditis. At the age of 16 years she became pregnant and was admitted to University College Hospital suffering from chorea of terrible severity from which, after a very long and severe illness, she recovered. The other was a young woman who suffered from rheumatism with chorea as a girl, who passed through a first pregnancy without chorea and developed chorea 12 months later when she was not pregnant. Finally, it is recognised that induction of labour does not so influence the course of these cases of chorea that the pregnancy can be claimed to be more than a predisposing cause. All these points suggest that the chorea in pregnancy is of the same nature as the chorea of childhood.

The second and wider question of the influence of pregnancy and the puerperal state upon rheumatic infection needs prolonged investigation. We have, on the one hand, a great infective process, the rheumatic, and on the other, an important physiological process, which in some measure disturbs the entire metabolism of the individual. Chorea is more obstinate and dangerous in pregnancy, heart disease is liable to be more active, and arthritis more obstinate. Concerned with the same problem is the possibility that a puerperal fever may result from a rheumatic infection at the end of pregnancy and it is known that direct infection of the fœtus may occur.

Finally, we would point out that the conclusions from our paper in the first place support the clinical evidence that chorea is a manifestation of acute rheumatism; and secondly, that the demonstration of diplococci in each of the three cases is a striking confirmation of the assertion that "the diplococcus rheumaticus" is the infective agent in acute rheumatism.

[10] Transactions of the Medical Society, vol. xxvi.
[11] Practitioner, August, 1906.

THE TYPE IN SCHOOL BOOKS AND COLLEGE TEXT-BOOKS.

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THE vision of many school children and college students is defective owing to myopia. In a private boys' school which I recently examined 23 per cent. of the scholars were myopic; and of 55 students who have just entered the department of education of the Victoria University (for training for school teachers) 15 are myopic—i.e., 27 per cent.

Though there is a difference of opinion as to the production of myopia, there can be no doubt that prolonged eye strain during school life often causes or increases this defect. Many ophthalmic surgeons regard this eye strain as the most important of the causes of myopia. The whole subject has been carefully studied by many observers and by no one more thoroughly than by the late Professor Cohn of Breslau. Space does not permit any account of his conclusions,[1] but they furnish the strongest evidence of the injurious influence of severe eye strain during school life.

One important factor in the causation of this injurious eye strain is the bad type of many school books and it is very desirable that more attention should be devoted to this subject by those who have the supervision of the education of school children and college students. A

[1] I have stated the most important of these conclusions in a pamphlet on School Hygiene, published by Sherratt and Hughes, Manchester, 1904, p. 11.

small bad type in school books and college text-books not only causes eye strain and tends to produce myopia but also, owing to the eye strain caused by reading such a type, there is often difficulty in concentrating the attention on the subject of study and diminished interest in it. For these and other reasons it is most important that the type of school books and college text-books should be tested, as is done in some continental towns, and when it is found to be defective an endeavour should be made to obtain books printed in a satisfactory type. Of course, it would be absurd to choose books for study simply on the merits of the type; but when the type of any desirable book is found to be defective if the authorities of the school in which it is used strongly urged the publishers to print the work in a satisfactory type there is little doubt that this would be done, especially if the school authorities clearly intimated that the use of the work would be discontinued if the type were not improved.

There are many points of importance with respect to the printing of books in order that those who read them may not suffer from eye strain. These are given in the various works on school hygiene.[2] Professor Cohn has discussed the whole matter most thoroughly in his work on the subject.[3] In this short article I wish to refer only to the size of the printed letters and the distance of the lines apart. There is no absolute rule on these points, but the minimum size of type which Cohn would allow may be taken as a fair estimate for practical purposes, and I think that probably most of those who have studied the subject will allow that no type should be employed for school books and text-books which is smaller than Cohn's minimum.

The following are Cohn's conclusions on the size of type, the letter "n" being used for measurement: The height of the smallest "n" should not be less than 1·5 millimetres; the least distance between two lines of type 2·5 millimetres; the thickness of the stroke of the letter not less than 0·3 millimetre; the greatest length of the line 100 millimetres (about four inches); and the greatest number of letters in one line 60. Cohn has devised a simple test of the size of type—a test which indicates whether the type is smaller than the minimum just mentioned. A small square hole is cut in a piece of thin cardboard (or in a visiting card), the hole being exactly one square centimetre.[4] The card with the centimetre square hole is placed on the printed page of the book, the lower edge of the square being immediately above one line of print. A satisfactory type should be so large that only two lines of print can be seen in the centimetre square: if more than two are seen the type is too small and should be condemned.

Size of hole in test card:

(Square centimetre.)

The distance of the lines apart is very important, since a small type with the lines well separated is more easily read than a larger type with the lines close together.

Taking Cohn's square centimetre test as a trustworthy standard I have examined the type of 250 school books and college text-books with the following results. The type was equal to or larger than Cohn's minimum (i.e., not more than two lines in the centimetre square) in 109 books. In 30 other books there were in some paragraphs two lines, in other paragraphs three lines in the centimetre square. There remained 111 out of the 250 books (44 per cent.) in which the type was decidedly too small—i.e., three lines or more in the centimetre square. The exact results were as follows:—

Books.		Number of lines seen in Cohn's centimetre square.
139	109	2 or 1.
	30	2 in some paragraphs, 3 in others.
111	93	3.
	3	2 in some paragraphs, 4 in others.
	9	3 in some paragraphs, 4 in others.
	5	4.
	1	5.

Defective type, as regards size and distance of lines apart, in 111 out of 250 books = 44 per cent.

The type of school books has certainly improved very much in the last 30 years. In 78 per cent. of a series of old school books, printed between 1870 and 1878, the type was defective—i.e., three lines or more were seen in the centimetre square. In the 250 modern school books which I examined the defective type was met with most frequently in books on mathematics (arithmetic, algebra, trigonometry, &c.). In 67 per cent. of the books on mathematics the type was defective. The small cheap elementary works on science had also very frequently a defective type. Books on history, geography, travel, and books of general information were usually well printed and so were the elementary reading books for the junior classes. Many of the books of this class were beautiful specimens of the printer's art. But in cheap editions of poetical works and of standard English literature the type was often very small and defective. Particularly defective was the type of a large number of the very cheap editions of well-known novels (in school libraries) which are so eagerly read by the schoolboys and youths. Interesting books of this kind are specially liable to damage the eyes if printed in very small type. One of the worst printed books examined was a very cheap edition of "Robinson Crusoe" for schoolboys. I have tested the type of 40 books in the library in the reading room of a large hotel, the books being chiefly cheap editions of standard English authors. The type was particularly bad. In 23 out of the 40 it was defective. The worst was an edition of Shakespeare in which there were six lines of type in the square centimetre and many poetical works had four lines of type to the centimetre square.

Often the type of the Bibles used by school children is exceedingly small; frequently there are six or seven lines to the square centimetre. Of course, Bibles are printed by the British and Foreign Bible Society in all sizes of type, and cheap Bibles can be obtained for schoolboys in satisfactory types, whilst other schoolbooks are usually printed only in one type. There are good reasons, no doubt, for the printing of some Bibles in very small type, but the Bible Society would do well to issue "school Bibles" printed in a type not smaller than that of Cohn's minimum (two lines in the centimetre square). Atlases are often printed in a very small type and the maps crowded with names Often the height of the letters is only 0·5 of a millimetre, and often five or six names can be seen in the square centimetre in addition to the indications of rivers, mountains, boundaries, &c. This, of course, causes great strain to the eyes of the pupils. It is most desirable that a larger type should be used in the atlases for school children and that fewer names and details should be given. In most of the maps printed by the Royal Geographical Society (in the *Geographical Journal*) the type is much larger and clearer, though many of the less important names are printed in a type a little smaller than Cohn's minimum. These excellent maps might be well adopted as a standard of the minimum size of printing for school atlases.

The type in the text-books used by medical students and in larger works on medicine is now usually satisfactory but there are some books in which it is still very defective. The results of the examination of 33 of the modern text-bcoks most frequently used by medical students were as follows:

Books.	Number of lines seen in Cohn's centimetre square.
18	2
3	2 in some paragraphs, 3 in others.
12	3

Thus in 12 of the 33 books (about 36 per cent.) the type was defective as regards size and difficult to read for a long period without eye strain. The worst type was in two well-known books on materia medica and therapeutics.

In eight out of ten *advanced* English works on medicine only two lines were seen in the square centimetre; in the other two books in most paragraphs two lines were seen in the centimetre square, in some paragraphs three lines. In ten advanced German or Austrian books on medicine *all* presented only two lines of type in the centimetre square. Probably many students reading hard for examination will have noticed how much more easy it is to study a book on any subject with good type than one with small defective type.

The type of most English medical journals is satisfactory as regards size. The results of the examination

[2] Also in the pamphlet which I have already mentioned.

[3] Cohn and Rübencamp: Wie sollen Bücher und Zeitungen gedruckt werden? Braunschweig, 1903.

[4] Cards with a centimetre square for measuring the size of type can be obtained by post from Herr F. Tiessen, Inh. R. Schultz, Schmiedebrücke 30-32, Breslau, I., Germany.

of 40 journals with Cohn's centimetre square were as follows:—

Medical journals.	Number of lines in Cohn's centimetre square.
35	2
2	2 in some paragraphs, 3 in others.
1	3
1	2 in leading articles, 3 in original papers, 4 in smallest type.
1	3 in leading articles and original papers, 4 in smallest type.

Thus only three out of 40 have a defective type as regards size; but two of these, the two journals last mentioned, have the largest circulation, and I think most readers, who are over 40 years of age, sometimes wish the type could be made a little larger.

There are many other points of importance in the printing of books which space does not permit to be considered in this article. But the figures which I have given show clearly that, apart from other defects, the size of the type and the distance between the lines in a large number of school books are too small if the minimum of the best authors be accepted. Apart from actual measurements, in many of the school books examined, it was evident from simple inspection of a printed page that the type was too small to be read for any length of time without great eye strain.

Since so much attention is now being directed to school hygiene, and since we have in Cohn's square-centimetre test such an easy method of detecting the two most important defects of type (size of letters and distance of lines), it is to be hoped that the printing of school books will receive more consideration in the future. If those who have the supervision of the education of school children and students demanded that the type of school books should be satisfactory the risks of eye strain and myopia would be diminished nd the study of many books would be made easier.

Manchester.

AGORAPHOBIA—A REMEDY.

BY CHARLES MERCIER, M.D. LOND., F.R.C.P. LOND.,
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AGORAPHOBIA, or fear of open spaces, is, in my experience, not nearly as common a malady as its antithesis, claustrophobia. Both are curious, and somewhat anomalous, states of mind, in which an aversion, which is known and admitted by the subject of it to be irrational and absurd, nevertheless dominates conduct, prompts the execution of irrational acts, and renders certain rational and desirable acts impossible.

If I had to speculate on the origin of these curious and spurious instincts, for such they may be termed, I should assign them to the revival of instincts which existed in full force, and had great biological value, in our remote ancestry, but which in most of us have long been obsolete. When our ancestors were arboreal in habit, this habit was their salvation from extinction. Feeble in body, destitute of weapons and of defensive armour, devoid of means of concealment, their safety from carnivorous foes lay in the agility with which they could climb out of reach, and in the accuracy with which they could leap from bough to bough and from tree to tree. Whenever they descended to the ground, they were in danger. It is on the ground that the greater carnivora pursue their prey; and, adapted as our ancestors were to arboreal life, their progress on open ground was undoubtedly less rapid than among the tree tops, and most probably less rapid than that of their principal foes. Among the tree tops they were secure. There, no enemy could vie with them in activity, or hope to overtake them; but on the ground they were at a disadvantage. On the flat, they had no chance against the spring of the panther or the speed and wind of the wolf; but once let them attain the security of the forest, and they could grin and chatter with contempt at their helpless enemies below. The farther they ventured from their secure retreat, the greater the peril they were in; the nearer their refuge, the more complete their sense of security. Since instincts, using the term in the sense of mental cravings, become adapted to modes of life, which, in turn, they dictate, we may be sure that, in the arboreal stage of their existence, our ancestors had a very strong instinctive aversion to any extended excursion from their place of security and refuge. Near to trees, they were in safety; far from trees, they were in continual danger, and therefore in continual uneasiness. In such a situation they had an abiding and well-founded dread and sense of impending danger.

This is the state of mind which, as it seems to me, is reproduced in similar circumstances in agoraphobia. The craving of the subject of this malady is to be near, not trees necessarily, it is true, but near to some tall vertical structure. Away from such a structure, he has just the feeling of dread, of impending danger, of imminent disaster, of something dreadful about to happen, that a man would have who was walking through a jungle infested by tigers, or that a child has when alone in the dark. And this is just such a feeling as we may suppose our arboreal ancestors had when they were out of reach of their natural habitat. I have seen a woman affected with agoraphobia get from one side of a court to the other by not only going round by the wall, and touching it all the way, but squeezing herself up against it, and clutching at the bare surface. Sufferers from this malady cannot cross an open space. They cannot venture more than a step or two from some vertical surface. They feel no uneasiness in a colonnade, open all around them though it be. Their reason tells them that their dread is groundless, but reason is powerless against instinct, and an imperious instinct shouts danger in their ears.

The opposite malady—claustrophobia—seems to me to reproduce a state of affairs of much later occurrence in our racial history. When arboreal habits at length began to be abandoned, and our anthropoid ancestors began to shelter themselves in hollow trees, in caves, and holes in the ground, there must often have been a conflict between the immeasurably old, primitive habit of roosting under the open sky, and the modern innovation of taking shelter from the weather. The sense of confinement must have been very irksome. We may be sure that there was no sudden revolution in the mode of life. The new habit was adopted very gradually. Only in some very violent storm would the first indwellers creep into a hole for shelter, and they would soon find their circumscribed quarters intolerable, and brave the elements as soon as the weather began to moderate. Perhaps the new instinct was first implanted in the young, by the parents bestowing their tender offspring in holes during their own absence or when cold and rain became severe. It is not easy to teach an old dog new tricks; but a young wild rabbit or squirrel, taken at a very early age from the nest, never acquires the untameable wildness that is so conspicuous a feature in the character of the old. In any case, the habit of taking shelter in more or less closed spaces was a habit of slow and gradual acquirement; and we may be sure that it was not acquired without many a relapse and many a backsliding. We can almost hear the jeers and scoffs of the stout old Tory anthropoids at the effeminacy of their degenerate juniors, who should seek a shelter that their forefathers would have scorned. The habit has not yet been fully acquired by all our race, for we see, even at this late day, many persons of human status to whom the shelter of a roof is abhorrent, and who prefer, in the worst of weather, to lie out under a hedgeside rather than submit to the restraint of roof and walls.

It is to the imperfect acquisition of this later instinct of seeking shelter in confined spaces; or rather it is to the reassertion over it of the more remote and earlier instinct of craving for the open sky, and irksomeness of confinement, that the malady of claustrophobia seems to me to be due. In the subject of this malady is revived in its original strength that craving for open sky and open air, for possibility of movement in every direction, which were ingrained in our ancestors by their free arboreal lives; and which were overcome with such difficulty when first they descended to inhabit *terra firma*. Like the sufferer from agoraphobia, he who suffers from claustrophobia experiences the revival of an ancestral instinct that has been obsolete for untold generations, but that has been lost more recently than that revived in agoraphobia. Since it existed down to a later date; since it has been more recently lost, it is more easily revived; and this is the reason, I think, that claustrophobia is so much less rare than agoraphobia.

Whatever their origin, the two maladies are equally inveterate. They are refractory to remedies. They are recalcitrant to treatment. They endure for years, and often for a lifetime. Hence it may be useful to place on record a

case in which a cure has been effected, even though the remedy that proved so efficient is open to certain objections and is not applicable to every case.

A tall, spare man, with an expression dejected, undecided and ineffectual, came to me complaining of being "nervous and thoroughly run down." He could not concentrate his mind on his work; was always thinking of something else than his duty; his mind was confused; and he was in constant dread of he knew not what. He felt as if some great evil were impending over him; fancied he must be going to die; could not keep himself calm and collected, but was always agitated, nervous, and apprehensive. With the exception of constipation, sleeplessness, and occasional headaches, his bodily health was good. In addition to these troubles, he had very definite agoraphobia. In going to and from his office, he would sneak through all the alleys, courts, lanes, and narrow streets he could make use of. When he came on a wide street, he was seized with panic,—reasonless, groundless panic, that he knew to be reasonless and groundless. He felt as if something awful were going to happen. He could not walk along a wide street; he had to take a 'bus, or, if the street were not very wide, he might get through it by holding on to a cart. If he did not do this, he was sure he would fall down. He was afraid he would scream out, and make a scene. Bridges were quite impassable to him. If he were compelled to go over a bridge, he had to get into a 'bus some time before he came to it, and keep his eyes shut as he went over it.

Under ordinary remedies, he improved very much, so that, at the end of a week, he had the best night he had had for years. He gradually recovered his powers of concentration; became able to work efficiently; lost his headaches; ceased to feel the dread of impending evil; and was able to walk with comfort in a moderately wide street. He continued to improve, until at the end of two months, he was well, and had lost all his troubles except his agoraphobia, and that was diminished. I told him that this was a matter for which little could be done; that it was in its nature an enduring malady; that though it had somewhat improved, I feared I could do no more for it; that he must contrive to bear it as well as he could, and hope that in time it would wear away; and I advised him that he need not see me again unless he had a relapse of his other troubles.

I saw him no more for nearly four months, when he entered my consulting-room with an expression of face that puzzled me much. I had told him to return no more unless he relapsed, lost his power of concentrating his mind upon his work, or had a return of his accessions of dread and feelings of impending evil. But it was obvious at a glance that he came back for no such reason. His face, that used to be overcast with gloom and anxiety, was tranquil, placid, and I thought I detected even a lurking look of triumph. His irresolute step was become firm; his manner decided; and his whole being seemed changed and strengthened.

I expressed my regret that he had had to come back to me, and thereupon his face fell. He said he had had a dreadful shock; a terrible trouble. His daughter had run away from home, and joined a lover. It had been a frightful shock to himself and his wife. Still, he did not look shocked. On the contrary, he appeared complacent and contented. Then the murder came out "What I have come for, is not to consult you about my health, but to tell you that this shock has completely cured me. I have not the slightest difficulty in going anywhere I like. I can go through wide streets, over the bridges, across Trafalgar Square, and even into the parks. I can go anywhere and do anything just like anyone else; and this recovery came to me suddenly, immediately after I had this dreadful shock. I thought it would interest you to know."

It certainly did. It is the only case of agoraphobia that I have ever known to recover completely, and the manner of the cure was sufficiently striking. Having congratulated him duly, I proceeded to inquire into the circumstances of the elopement, and learnt that the girl had fled to the house of her lover's parents, in consequence of the persistent opposition of her own parents to the match; that the young couple were now safely married; and that the objection to the match arose from no moral obliquity, inequality of station, or deficiency of means on the part of the son-in-law, but merely from a want of congeniality between him and the bride's parents. Having extracted this information, I ventured to point out that as it was the daughter, and not the parents, who had married the young man, the objection was not a fatal one, and I took on myself to advise the bride's parents to be reconciled to their daughter and her husband, against whom there appeared to be no reasonable objection. After a little persuasion, they adopted this view, and went away without a cloud on their happiness.

As already stated, the therapeutic agent that proved so successful in relieving this patient of his troublesome malady is one that can scarcely be used as a routine mode of treatment. The next patient that consults me for agoraphobia, I may be able to cure by running away with his daughter; but the mode of treatment has inevitable limitations. Supposing the first dose, if one may so call it, to be unsuccessful, would the therapeutist be justified in repeating it, and if so, how often? Suppose the patient has but one daughter, whose abduction is found inefficacious, would one be justified, as a further means of treatment, in running away with his wife? Fortunately, agoraphobia is one of the less frequent maladies that afflict mankind. Were it frequent, it is evident that the house of the specialist who should treat it on these lines might become inconveniently crowded. There are other difficulties, moreover. Not every patient who suffers from agoraphobia has a marriageable daughter. Some of them are themselves unmarried. In such cases, ought one to advise them to marry, with the prospect of having some day a daughter, who should in time become marriageable, and competent to take part in the treatment? Such a course would be vitiated by delay and uncertainty. At the best, it would be years before the effective part of the treatment could be put in action; and at the worst, the unfortunate patient might be tantalised by the appearance of an unbroken series of sons. It is to be expected that such a patient might lose patience, and refuse to continue the treatment beyond a certain number of decimals. In addition to these objections, which are not captious or trivial, I can see the possibility of others. It is not every patient who would suffer a terrible shock on hearing that his daughter had married a very eligible young man, even though the marriage were without the consent of the parent. Finally, it is clear that there are persons to whom this mode of treatment could not possibly be applied. Some of the sufferers from agoraphobia are old maids.

Of course, filial abduction is not the only way of administering such a shock as may prove curative. It is open, as we have seen, to various objections, and it would be advisable to find a method that should be more generally applicable, and attended with fewer inconveniences, both to the patient and his medical attendant. It is probable that if the patient were to discover suddenly that his house was on fire, or that he had lost his fortune, the resulting shock would be quite as severe, and therefore equally efficacious. There are, however, legal difficulties in the way of setting fire to a man's house, or robbing him of his fortune, even though these acts are done with the praiseworthy motive of curing him of agoraphobia; and it is to be remembered that the curative effect is by no means certain. We have only a single case to go upon. Short of these methods, which may be regarded as somewhat heroic, there are other modes of administering shocks, of minor intensity, it is true, and therefore less likely to be radically curative; but still, a mitigated trouble might produce an amelioration of the symptoms, even if it did not effect a complete cure. The patient might be upset out of a boat; he might be compelled to cross from the Mansion House to the Bank at noonday; he might have a dose of liquozone; he might be taken for a ride in a motor 'bus; or perhaps best of all, he might be compelled to dine at the Hotel Magnificent, and be presented with the bill. If the shock thus inflicted should prove inefficacious, it might be safely assumed that further treatment on these lines would give no result.

Seriously, the event of the case above related, if it do not place in our hands any very efficacious curative agent, does at least teach us that the malady is not as deep-seated as its long continuance and recalcitrance to treatment might lead us to infer. In these respects, as well as in its sudden recovery upon a great emotional shock, it betrays an affinity to hysteria, and may probably be found amenable to treatment by imperative suggestion (by which I do not mean hypnotic suggestion), such as is sometimes so efficacious in hysterical maladies.

Wimpole-street, W.

A CASE OF

CEREBRAL TUMOUR, GIVING RISE TO JACKSONIAN EPILEPSY AND, AT A LATER STAGE, COMA;

OPERATION; REMOVAL OF TUMOUR; RECOVERY.

BY JOHN A. C. MACEWEN, M.B., B.SC. GLASG., F.F.P.S. GLASG.,

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THE patient in the following case was a man 27 years of age. He was admitted to a surgical ward in Glasgow Royal Infirmary on July 1st, 1906, having been transferred from the medical wards in charge of Dr. David C. McVail, where he had been under treatment since Dec. 28th, 1905. The history supplied from the medical side of the infirmary was to the effect that he had first come under notice in 1904, suffering from a large sore over the sternum, which yielded to antisyphilitic treatment. He remained well after this until March, 1905, when he began to suffer from headaches which soon became constant and severe, the pain being particularly located over the vertex. Then giddiness and vomiting began to accompany the pain and would sometimes occur two or three times daily. The first epileptic fit occurred on Dec. 12th, 1905, nearly seven months before his transference to the surgical ward. An aura, consisting of a tingling sensation in the right foot, occurred first, followed almost immediately by contraction of the muscles of the right lower limb. The convulsion then became general and the patient lost consciousness. The fit lasted three minutes and he was weak after it but not dazed. Five similar attacks occurred during the next two weeks and it was then noticed that he suffered from a paresis of the right leg which soon involved the whole right side, with the exception of the face. He was still, however, quite able to move about but dragged the right limb slightly in doing so. The eyesight and hearing were good at this time but it was noticed that his memory was becoming defective. He slept badly.

Early in January the patient had two or three fits, one of which was of an intermittent character and lasted in all some five hours. In at least one fit which he had about this time the aura and also the convulsive movements began in the right arm and not in the leg. From this time onward the fits became less frequent and the headache less severe, but latterly the sickness and vomiting became so frequent that it was deemed advisable to stop the specific treatment which, up to now, had been regularly carried out. Up to June 24th he was able to leave his bed and to look after himself fairly well, but from this date onward his condition became rapidly worse and he was accordingly transferred to the surgical wards under my charge, while acting for Dr. Peter Paterson.

On admission to the surgical wards the patient was found to be in a rather drowsy condition. His pulse was slow (52 per minute) and full and his temperature was subnormal (97° F.). He lay very quiet, never trying to turn or to sit up. When roused, and there was generally some difficulty in rousing him, he took some time before answering a question, and then answered slowly by a monosyllable. "Yes" and "No" were practically the only answers he gave, and sometimes he seemed to have great difficulty in saying "Yes," as, while the lips moved, no answer came. Frequently no answer whatever was given. He never asked for anything. He could move a limb when asked to do so but the right leg was moved with difficulty, chiefly by the trunk muscles, while the right arm was absolutely paralysed and there was right facial paresis. Swallowing was accomplished with difficulty and some degree of choking frequently occurred even with liquids. He could not protrude the tongue. Urine was passed in bed and, in spite of vigorous medicinal treatment, there was absolute constipation. With regard to the eyes, both pupils were sluggish but the left one was dilated and irresponsive save to very strong light. On examination with the ophthalmoscope optic neuritis was found to be very marked over both discs, the left being more markedly affected. Ptosis was marked on the left side. He had no fits for over six weeks prior to his transference to the surgical wards, nor had he any during the few days that he was in the surgical ward prior to operation.

From the foregoing history and symptoms the presence of a tumour in the left motor area, involving principally the leg and arm centres, and giving rise to very considerable pressure, was diagnosed. Two points of difficulty, however, arose. The first was the slight discrepancy between the history of the onset of the fits and the present condition of the limbs. The history stated that, as a rule, the fits began in the leg, whereas the patient could move the leg slightly while he had an absolute paralysis of the arm. The second point was the rapid deterioration in his condition during the previous ten days, a symptom which, it was feared, might point to some more general involvement, possibly œdematous or inflammatory, and not merely to pressure from a well-localised tumour. During the four days prior to operation his condition became distinctly worse even than it was on admission. Thus on the morning of operation he was comatose, his pulse-rate was 48, and his temperature was 96·4°.

The patient having been prepared, save that the bowels could not be got to act, the operation was performed on July 5th. Taking into consideration that the fits were a little variable in their place of origin and that the history of the fits did not tally with the present condition as regards paralysis of the limbs, it was decided to investigate both arm and leg areas. He was accordingly anæsthetised, chloroform being used for the purpose. Only a small quantity was required, six drachms altogether, for an operation lasting some three hours, nearly all of it being used during the first hour. He showed a distinct tendency to stop breathing whenever he was put fully under its influence. An osteoplastic flap, of horseshoe shape and barely two inches in diameter, was raised from the left upper Rolandic area. The bone was first perforated in several places by a drill and the intervening portions were cut through by a Gigli saw; after which, periosteal elevators having been introduced as levers, the base of the bone flap was divided and the flap, consisting of bone, periosteum, and soft tissues of the scalp, was turned back, so that the dura mater was exposed. It was found, however, while this was being done that firm adhesions existed between the dura mater and the bone at the upper part of the flap. The dura mater thus exposed was found to be very tense, so much so that palpation of the underlying structures was practically impossible and pulsation of the brain was absent. It was more resistant toward the vertex, and this portion was covered with the small adhesions which had been divided on removal of the skull.

A crucial incision was next made very carefully over the most prominent portion of the dura mater and immediately the brain matter bulged into the wound. At the same time it was reported that the pulse-rate, which up to now had been about 50, had risen to 60. A little later it rose to 90, then to 110, and finally to 144, changing in character from being hard and full to being very soft and feeble. The brain matter was encouraged to bulge, in the hope that, cerebral pulsation having been now restored, the tumour might be extruded without further manipulation. This, however, did not occur. The brain substance which protruded was very œdematous and finally ruptured, a small quantity of disintegrated brain matter being extruded. Palpation of the actual brain substance confirmed the sensation of firmness toward the vertex and the dura mater was accordingly opened up toward the upper limit of the aperture in the bone.

While this portion of the dura mater was being incised it was observed to be closely adherent to the brain substance by large numbers of small soft adhesions. No evidence of actual tumour being found on the surface a pair of sinus forceps was very carefully inserted downwards through the cortex, slightly opened, and then withdrawn, but no tumour substance presented. The little finger was accordingly very carefully inserted along the track of the sinus forceps and at a depth of about an inch came in contact with a rather hard mass lying firmly imbedded in the brain substance. It was hoped that very slight manipulation would serve to dislodge this mass but such proved not to be the case. It was necessary to sweep the little finger carefully all round the tumour, freeing it from adhesions in all directions, before it could be dislodged. In so doing it was found to be adherent by a slight attachment to a second mass which lay more posteriorly. The attachment having been broken, the mass, which was spherical and about one inch in diameter, was gently removed. In like manner the second mass, which was larger and extended both superficially and

deeply, was freed from attachments and removed. During removal it was found to be very adherent to the dura mater, and particularly to the dura mater of the longitudinal sinus, its detachment from this portion requiring the exercise of much care and patience. This second mass was ovoid in shape and measured about one and a half inches by one inch. Both masses were firm and avascular, with here and there soft areas. They were of a yellow colour. The whole tumour weighed almost five drachms. Subsequent microscopical examination showed both masses to be granulomata, probably syphilitic.

A careful examination of the surrounding parts by palpation failed to reveal any further tumour mass, and as there was practically no bleeding from the brain substance the dural incision was carefully stitched, after which the osteoplastic flap was replaced and the skin was also stitched. An aseptic absorbent dressing was then applied externally and the patient was returned to bed. After the operation he looked very pale; the pulse was fast and weak and the breathing was regular. A few hours later the bowels moved repeatedly and about the same time it was noticed that the pupils had become equal and were also responsive to light. On the same evening he began to give signs of returning sensibility, being able to answer "Yes" and "No," and that more sharply than he had done before the operation. He could also swallow with ease, could move the right leg, and, for the first time, made some attempts to move the right arm.

During the two days following the operation the patient's temperature ranged between 99° and 100°, while his pulse-rate was between 88 and 104, and the respirations numbered from 18 to 20 per minute. He now gave distinct evidence of spontaneous and even purposive movements of the right leg and, occasionally, of the right arm. While, however, he could flex the right arm he could not extend it. Slight right facial paresis still persisted and he was unable to protrude the tongue. The optic neuritis was still as intense as formerly. On July 8th (three days after the operation) it was observed that he now gave signs of attending to his comfort. He frequently arranged the blankets with his left arm and lay on his left side instead of, as formerly, on his back. He was still unable to protrude the tongue. The pulse quality had markedly improved and the bowels moved regularly. During the period from July 9th to 12th he called "Nurse" when he wished anything, as he had been told to do. He also called "Food" when he felt hungry. On the other hand, he very often misnamed articles presented to him and could not remember the names of many others, although he clearly recognised them. When, for example, he was shown a clock he said it was "six" but could not remember the word clock. When asked if it was a watch he said "No," and smiled and said "Yes, clock," when the correct word was mentioned. When asked a couple of questions in succession he frequently gave an answer to the first when he was asked the second, and sometimes he gave wrong answers to questions and wrong names to articles presented to him. He, however, looked disgusted when he gave such answers and sometimes said "No, I don't mean that." He could give his name, age, &c., correctly, if not previously plied with questions.

A note made on July 16th (11 days after the operation) stated that a marked change in the condition of the patient's intellect was now observed. He could speak sensibly and his memory had markedly improved. He remembered his time of service in South Africa, the name of his regiment, &c., and other events up to the time of his coming into the infirmary. This incident, however, and all succeeding ones he appeared to have forgotten. Being anxious for solid food, and having been told that he must get the "Chief's" permission first, he made a vigorous effort to make his wishes understood at the morning visit. He, however, objected to be questioned, telling the nurses that he knew quite well what he wanted but that he was unable to get the proper words for the answer. He asked for a book to read and was able to recognise some words after spelling them slowly over but was unable to understand the context. On the 18th he was still unable to protrude the tongue when asked to do so, although he believed that he did protrude it. He was therefore asked to put his hand up and feel whether the tongue was out or not. Having satisfied himself that the tongue was not out he immediately protruded it properly and has been able to do so since. He was now found to be able to extend the right arm as well as to flex it. When asked to whistle, he whistled a bugle call, and he recognised a flower when shown one. From this date improvement was steady. He became gradually brighter, answered questions at once, and asked others. He frequently volunteered information regarding his condition. His chief difficulty seemed to be in giving the name of some person or thing when asked for it. The wound was dressed for the first time 24 days after the operation and was found to be perfectly healed.

The patient was allowed to get up some seven weeks after the operation. He was now very well and bright and intelligent, although he sometimes found difficulty in expressing himself, particularly when excited. The right arm and leg being still deficient in power, as was to be expected, a course of massage was ordered. He had no fits after the operation.

Glasgow.

THE PREVENTION OF CANCER REGARDED AS A PRACTICAL QUESTION RIPE FOR SOLUTION.

BY C. B. KEETLEY, F.R.C.S. ENG.,
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IN THE LANCET of August 18th, p. 419, Professor A. W. Mayo Robson justly calls attention to the desirability of the early recognition of what might be termed suspicious appearances suggestive of cancer of the stomach in order that an exploratory operation, and possibly a radical cure, may be made in good time. Incidentally he quotes Professor William Osler's opinion that 10 per cent. of gastric cancer cases are fatal within three months and the observations of many authorities on the frequent "grafting of cancer upon long-standing ulcer" of the stomach. I think we must all agree with Professor Robson, but I would invite your readers to go a little further. Is there much hope of the rapid cases which kill in three months being often diagnosed in time to be saved by surgery? Is there no prophylaxis of both gastric ulcer and gastric carcinoma? You allowed me to argue this question at some length in THE LANCET of August 31st, 1901, p. 584, and I dealt further with it in the *Medical Press and Circular* for 1905, vol. ii., p. 1. I would also refer to the article in which Sir James Paget advanced strong reasons for the view that cancer is a parasitic disease, pointing out some of its many important resemblances to syphilis and tubercle.[1] Professor Metchnikoff, in the Harben lecture for 1906, referred to somewhat similar views to mine, saying they are held by Czerny and not denying that they may be right. I hold that the time is now as ripe and as promising for the organisation of a system for the prevention of cancer as in 1870 it was ripe for the introduction by Lister of a system for the prevention of the deadly complications of wounds. The micro-organisms which cause wound infections were not demonstrated until *after* the introduction of Listerism. What might be termed the bacteriological basis of that system was the knowledge then possessed of putrefaction; and the most deadly complications of wounds which antiseptic treatment has banished from them—e.g., tetanus and some of the worst forms of peritonitis and meningitis—are not caused by putrefaction. All depends on whether or not the *materies morbi* of cancer is or is not some living principle introduced into the stricken animal from without. If bacteriology has proved anything it has demonstrated that such principles or causes of disease cannot live long in the presence of degrees of heat which are lower fortunately than temperatures which render foods worthless.

I think the grounds for attributing cancer to some living organism to be exceedingly strong. I will not trespass on your space to repeat arguments already set forth in articles to which the references have just been given. I cannot see that histologists have effectively controverted the hypothesis of a causative micro-organism in cancer by advancing theories of the mode of multiplication of cancer cells, whether their observations and hypotheses be right or wrong. They differ so much among themselves that they cannot be entirely right. Nor does the fact that cancerous

[1] THE LANCET, Nov. 19th, 1887, p. 999.

mice fail to infect healthy mice who are merely kept with them prove anything except a failure to appraise clinical observations at their true value, in those who lay stress on it. In the case of those tumour-producing diseases with which cancer has clinically the nearest relations—e.g., syphilis, tubercle, and leprosy—it is striking what long periods of intimate cohabitation can pass without causing infection. Reflect on the following case. A woman, aged 27 years, was for 21 years a sufferer from lupus of one leg so severe that she came under me for amputation (from my colleague, Dr. P. S. Abraham). The other leg was quite healthy. Now those two legs had been bedfellows and had otherwise lived together more intimately than any pair of mice and men all the time and presumably the "constitution" of the two legs was at least as identical as that of two mice. Negative observations in this connexion have small value but the positive observations which the clinician makes from time to time, even if rarely, are of great significance. For instance, I saw a small epithelioma of the tongue develop opposite a larger and older one of the lower jaw. And epitheliomata of the leg form nowhere except on the site of some long-standing, neglected ulcer ripe, as it were, for infection from without.

Nor can I admit for a moment that the Cancer Commission has disposed of the question by saying *ex cathedrâ* that differences of food have nothing to do with the cause of cancer. This protests too much. Has food nothing to do with the causation of chronic gastritis or with dilated stomach? What about alcohol? What about excessive beer-drinking? Does not chronic gastritis predispose to cancer and who are the classes and nationalities of people who suffer most from cancer of the stomach? Do old gastric ulcers and cicatrices not predispose to that malady? These questions are not to be disposed of by statements that teetotal Hindoos as well as lager-beer-drinking Germans are liable to gastric carcinoma, statements made without regard to comparative liability. I have only touched on arguments and contentions which have appeared recently. As I promised, I will not here go at length into the question, but will straightway lay down the following rules for the prevention of cancer. These rules would tend to protect from other diseases and so much the better. Listerism, which was meant to protect wounds from putrefaction and suppuration, incidentally proved effective against tetanus and various grave specific infections; also, so much the better.

1. Sterilise the food. The majority of cancers attack the alimentary canal and especially the parts where food and fæces tarry—e.g., the lips, the margins and under surface of the tongue, the tonsils, the gullet behind the larynx, and again where it is crossed by a bronchus, the lesser curvature of the stomach near to the pylorus, the pylorus itself, the ileo-cæcal region, the sigmoid flexure, the rectum, any part of the alimentary canal which has been the seat of chronic ulceration or of cicatricial contraction, and the lower portion of the large bowel in those curious cases of multiple polypi which tend to delay the passage of solid fæces, just as hillocks and trees check the downward course of snow on a hill side. Cancers of the biliary and pancreatic passages as well as those of the uterus are explicable through the observations of Bond of Leicester on ascending currents. Besides, the hypothesis of direct infection does not negative the possibility of infection from the blood.

2. The sufficient and regular toilet and protection of the nipples and of the genitalia. It is significant that these organs, each the outwork of a region frequently attacked by cancer, are specially often polluted by stale secretions and discharges and are more frequently handled by their owners than any other part of the person usually covered by clothing. They should be washed regularly and well, thoroughly dried and clothed with soft, unirritating material which should itself be clean. During lactation especial attention should be given to cleanliness and dryness of the nipple and to cleanliness of the infant's mouth.

3. Due care of the mouth and teeth.

4. The dressings of discharging malignant ulcerations should be destroyed carefully and not allowed to pollute either the fingers or the underlinen. The carelessness, not only of the sufferers but also of many medical men and nurses about this point is amazing.

5. Non-malignant sores and tumours should be cured and especially not allowed to drift on if chronic. Instances in which old scars and chronic ulcers have become the seat of cancer are well known to be innumerable.

6. As a matter of course, cancerous and doubtful tumours and ulcers should be excised promptly. Early removal of a cancer performed in a correct and thorough manner not only gives the patient an excellent prospect of complete cure but also removes a possible focus from which other people may acquire cancer.

7. Abstinence should be practised from alcohol, tobacco, and from foods which leave waste products, of which the kidneys, the bowels, and the skin cannot easily and thoroughly get rid and which thereby provoke and sustain the chronic inflammations and ulcers which so often pave the way for cancer. This rule forbids, among many other dietary abuses, that excess of meat eating to which the late Sir Mitchell Banks gave a place in the etiology of cancer. Its observance would also have protected many alcoholics and smokers from cancer of the tongue, throat, and stomach.

8. Physical familiarity should be avoided, except with those who are nearest and dearest to us. We get the majority of our diseases either directly or indirectly from one another and the more exclusive our intercourse, whether innocent or otherwise, the safer we are. Even those who will deny that this is true of cancer may acknowledge that it applies to some of those chronic diseases which prepare the ground for cancer. I believe that most rules for the preservation of health tend to the promotion of morality, but this rule has that tendency in a special manner.

9. Much thought should be given, especially by mistresses and housekeepers, to the *service* as well as to the cooking of food, with a view to disease prevention. The way to teach cooks and kitchenmaids with this object is not so much by talking to them as by (1) seeing that they are provided with all reasonable facilities for keeping their persons clean and their utensils aseptic, and (2) regularly observing them at their work in order to see whether they have contracted aseptic habits. Any intelligent servant can be made to understand that her own well-being, and even her own good looks, often the more important consideration to her, depend upon her attention to the hygiene of the kitchen and scullery. A copious and properly placed supply of hot water is the first essential. Next come sufficient clean cloths, towels, table-room, soap, soda, and a good light. Uncooked food, such as salads, if eaten at all should be carefully inspected by the mistress and the detection of dirt on them regarded as the proof of negligence almost criminal. Bread loaves from the baker's should be sterilised in the oven. Bakers' boys are not exempt from syphilis and other affections which may pave the way for cancer and sometimes the loaves are upset in the street. When a servant is herself ill the cause should be ascertained with the help of a careful medical man. It is worth a mistress's while, in her own interests, to take some pains to keep her servants well and to have them quickly cured of their illnesses. It is a not uncommon thing to meet with cooks suffering from cancer itself and even from ulcerating and discharging cancer. Tubercle is, of course, quite common in every class of domestic servant. When the service of the house has been at last put into due order it should be the rule as much as possible to take the meals there and not to go needlessly to clubs and public buildings to eat, still less to drink. The rolling stone gathers no moss. What it would gather, if it were a vital organism, would be disease.

Some of the above recommendations may be regarded as counsels of perfection. They none the less constitute a good standard at which to aim. Whenever a medical man gives advice involving a little trouble to persons whose habits run counter to it, some who need the advice most show their gratitude by deriding it. One can imagine the hog saying to the lion: "My good friend, why do you spend so much time cleaning your fur and actually sit up half the night to get fresh meat for supper? What! 'Trichina spiralis'! Pooh! I don't believe there is such a thing. It was invented by one of the gentlemen who write leaderettes for the medical journals."

Is there any article of food which is particularly open to suspicion? Let us bear in mind that nearly all primary carcinomata attack either the alimentary canal or the skin or passages which open into the skin or the alimentary canal. Now, is there any article of food which comes much into contact with the skin? Milk is analogous in origin to the secretions of skin glands, to sweat and to sebaceous material. The breasts are skin glands. The skin therefore comes into intimate relationship with substances similar in nature to milk and the breast comes into contact with milk

itself. Now the breast is that part of the outside of the body which is most prone to carcinoma. Further, other external parts which suffer from a well-marked liability to carcinoma—viz., the vulvæ, the penis, and the nose—are remarkable for their copious supply of cutaneous glandular secretion. From these considerations I think special attention should be paid to the sterilisation of milk and its products, cheese and butter. Incidentally, this would assist in the prophylaxis of tuberculosis. And further, the vulvæ and the glans penis, as well as the prepuce, should be kept scrupulously clean and free from eczema, herpes, and ulcerations of every kind.

Grosvenor-street, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

WESTMINSTER HOSPITAL.

A CASE OF ACUTE YELLOW ATROPHY OF THE LIVER.

(Under the care of Dr. DE HAVILLAND HALL.)

FOR the notes of this case we are indebted to Dr. Cavendish Fletcher, house physician.

The patient, who was a man, aged 21 years, was admitted to the Westminster Hospital on August 31st last. The history which he gave was to the effect that his illness commenced on August 18th, when he vomited two hours after breakfast and all that day he felt "bilious." Three days later he noticed that his skin had become yellow and this colour gradually deepened up to the time of his admission to the hospital. He continued to vomit two or three times a day after food and he said that he felt increasingly weak and lethargic. His bowels were regular daily. He stated that six months previously he had contracted syphilis, for which he had been treated by a medical practitioner up to the time of his admission to hospital. He had had no other previous serious illness.

On admission he was found to be a well-nourished young man of a somewhat lethargic temperament. The skin, conjunctivæ, and mucous membrane of the mouth were deeply jaundiced, the colour being a bright yellow. His mouth was very foul, there were two carious teeth, and the tongue was coated with a thick white fur. On the lower abdomen and inner side of the thighs was a rash consisting of round patches of a coppery-coloured stain, not raised and not fading on pressure. These were considered to be the remains of his syphilitic rash but there was no definite scar on the penis. The abdomen was full, rounded, and quite soft and there was no tenderness anywhere. The liver dulness was normal. The heart and lungs showed no abnormal physical signs. The patient complained of no pain. The temperature was normal; the pulse was 56 per minute, full in volume, but low in tension. The urine was dark greenish-brown in colour and had a specific gravity of 1012; it was acid and contained no albumin or sugar but bile reactions were well marked.

The case was considered to be one of catarrhal jaundice and the patient was put on a liquid diet and given five grains of calomel followed by a saline purge on the following morning. His bowels acted next day and the motions were watery and of a light clay colour. On Sept. 1st, 2nd, and 3rd he remained in the same condition and vomited two or three times a day after food. On the 4th a marked change came over the patient. He became very drowsy but could be roused to take food. The vomiting became more frequent but consisted only of curdled milk and a frothy watery material. The temperature fell to 96° F. in the early morning and remained at that level. The pulse was still very infrequent and the liver dulness was still normal. As his bowels were confined he was given three grains of calomel and a saline aperient three times a day. On the next day the patient was in the same torpid condition, his temperature was still subnormal, and the pulse was slow. The purgatives had no effect in opening the bowels. On the 6th his condition became very much worse. His colour deepened to a dark bronze, he lay semi-comatose, and vomited almost incessantly. The vomit now contained blood, at first red but later of a dark coffee colour. The liver dulness was now definitely diminished, the comparative dulness starting at the sixth rib and the absolute dulness at the seventh rib in the mid-clavicular line and extending down only to the lower border of the eighth rib in that line. The urine was examined for leucin and tyrosin. Leucin was found in quantity but no definite tyrosin crystals could be demonstrated, although there were some small clusters of very tiny, needle-shaped crystals resembling tyrosin except in size. There were numerous hyaline and granular casts and some Charcot-Leyden crystals. The urea excretion was apparently not diminished. A blood count showed nothing abnormal. Later in the day the patient became delirious. He understood nothing that was said to him, moved his limbs about in an aimless fashion, and made frequent attempts to get out of bed. His temperature remained persistently subnormal but the pulse gradually rose in frequency from 56 to 116 per minute and declined in volume. The bowels were obstinately confined, a simple enema and a turpentine enema being returned without result. The diagnosis of acute yellow atrophy of the liver was now considered to be established. On Sept. 7th the liver dulness was still further diminished and was now represented merely by a narrow band about an inch in width between the seventh and eighth ribs. There was no ascites. On this day a few scattered hæmorrhagic spots appeared on the chest. The delirium passed off and the patient lay almost comatose. The bowels remained unopened in spite of an enema containing two ounces of castor oil administered about 18 inches up the bowel and two minims of croton oil given by the mouth. The pulse rose in frequency steadily to 130. His temperature now began to rise rapidly and from being 96° in the morning it reached 103·4° at midnight. The patient's condition passed into deep coma with stertorous breathing and finally Cheyne-Stokes respiration, and he died at 2.10 A.M. on Sept. 8th.

Necropsy.—A post-mortem examination was made under the direction of Dr. R. G. Hebb ten hours after the patient's death. All the tissues were deeply jaundiced, with the exception of the brain which was normal in colour. There were numerous hæmorrhagic extravasations in all the organs, most noticeably under the endocardium and pericardium and in the lungs and peritoneum. The colon was loaded with scybala. The liver was small, weighing only 31 ounces and measuring seven inches from side to side across the upper surface. The capsule was wrinkled in places. The left lobe and adjacent part of the right lobe were dark red, firm, and fleshy. The greater part of the right lobe was bright yellow in colour with irregular areas of a dark red colour scattered through it; it was much less firm in consistence than the left lobe. The gall-bladder was empty; the bile and pancreatic ducts were quite pervious. The microscopic appearances of the two lobes differed. The sections of the yellow portion of the right lobe showed all stages of degeneration; in them there could be distinguished apparently normal liver cells with nuclei, cells which had lost their nuclei and were undergoing granular and fatty degeneration, and finally parts where the cells had become completely disintegrated and broken up into granular and fatty débris. The sections of the red left lobe, however, showed no trace of normal liver tissue save the fibrous framework which stood out prominently owing to the disappearance of the cells. The shrunken lobular structure could be seen in this connective-tissue framework but the interstices were everywhere filled, not with cells, but with a granular-looking degenerated material which took the stain very badly. It appeared obvious from the sections that the yellow right lobe represented the earlier stage of the destructive process, whilst the left lobe, though looking much more normal to the naked eye, really represented the final stage of the disease.

Remarks by Dr. FLETCHER.—This case, in which the clinical diagnosis was confirmed by a necropsy, differed only very slightly from the "presumed case of acute yellow atrophy of the liver" published in THE LANCET of Sept. 8th, p. 651. The main points of difference were the obstinate constipation, the intractable vomiting, and the subnormal temperature which were present in the case now described. The connexion with syphilis is interesting, although the paucity of data, of course, makes it impossible

to class the two diseases as cause and effect. The great rarity of the disease is sufficiently demonstrated by the following figures. The total number of post-mortem examinations performed at Westminster Hospital during the 19½ years from 1887 up to the present date inclusive is 3928, and only seven of these (including the above case) were cases of acute yellow atrophy of the liver. Of these seven cases four were in males and three were in females. Two of the male cases were infants, one aged one year and five months and the other two years and two months.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Annual Meeting.—Presidential Address.—Actinomycosis of the Vermiform Appendix.

THE 134th annual meeting of this society was held on Oct. 8th, Sir LAUDER BRUNTON, the retiring President, being in the chair.

The Treasurer's report and balance-sheet and the Librarian's report were duly presented and adopted; votes of thanks to the retiring officers were moved and adopted; and the PRESIDENT made feeling reference to the loss which the society had sustained in the death of Mr. David Goodsall who had for many years filled the office of treasurer to the society.

The first ordinary meeting was then held and the incoming President, Mr. C. A. BALLANCE, took the chair and delivered his opening address on "Then and Now in Surgery" which will be published in a future issue.

Mr. T. H. KELLOCK read a paper on Actinomycosis of the Vermiform Appendix. He first pointed out how much more frequently actinomycosis, or streptothricosis as the affection should preferably be termed, was recognised since more modern methods of examination had been employed. The affection was formerly believed to attack the jaws, the liver, and the lungs almost exclusively in persons whose lives were spent in the country; it was now often recognised in other parts of the body or in town dwellers. The star or ray formation was not always present, and its absence must frequently have led to a negative diagnosis when the affection might have been recognised by proper staining. As the fungus of streptothrix generally entered the body by the alimentary or respiratory tract and had a great disposition to insinuate itself along the ducts of glands opening into these, it was easy to understand that the vermiform appendix should fairly frequently be attacked when the organism had travelled along the alimentary canal as far as the cæcum. From the number of reported cases actinomycosis of the vermiform appendix would appear to be a not very uncommon form of disease of that organ. An investigation of the records at the Middlesex Hospital showed that during the last three years seven cases had been under treatment in which the presence of a streptothrix had been demonstrated. The notes of two cases were read in which septic infection had been superadded to the streptothrix, in both of which portal pyæmia and streptothrix abscesses in the liver had been found post-mortem and in one case a similar affection in the pancreas and pleura was revealed. In three cases the disease had been limited to the neighbourhood of the appendix. Two cases were associated with an abscess presenting through the abdominal wall at some distance from the appendix region. A streptothrix infection of the vermiform appendix might thus be met with under two forms—the one simple, the other associated with a septic infection. In the first the condition was difficult to distinguish from an ordinary case of appendicitis. In the second form the patients were often extremely ill and rigors and septic pyelophlebitis (both rarely seen in cases of ordinary suppuration about the appendix) seemed to be relatively common. These two forms of the affection were similar to what was sometimes seen when the disease occurred in other parts of the body, such as the cheek. Attention was called to the tendency of the abscesses to burrow and point at a distance from the original seat of the disease. The question was raised as to whether the so-called secondary streptothrix affections of the liver were really conveyed thither by the blood-stream or whether they were not really an independent infection from the alimentary canal; and in one of the reported cases the discovery post mortem of a streptothrix abscess in the head of the pancreas was quoted in favour of the latter view. The points that would be likely to be of help in arriving at a diagnosis of actinomycosis of the appendix in non-suppurating cases would be a long history of slight indefinite pain in the region of the appendix, a relatively large amount of induration, and, if operation were performed, the small quantity of broken-down material found. In suppurating cases the occurrence of rigors early and the pointing of abscesses at a distance from the appendix region were in favour of actinomycosis. The treatment should be both constitutional and local. In simple cases the best results followed removal of the appendix and as much of the affected surrounding tissue as possible, combined with treatment by large doses of iodide of potassium or arsenic. Suppurating cases were much more serious and little benefit was likely to be derived from the use of drugs until the septic condition had been dealt with by ordinary surgical measures. It was pointed out how exactly this coincided with what was experienced in dealing with the affection as it occurred in other parts of the body.—The PRESIDENT remarked on the importance of examining all appendices pathologically after removal.—Mr. H. J. WARING observed that it was almost impossible to decide whether actinomycosis had commenced in the appendix or in the adjacent parts of the cæcum. The detection of the characteristic fungus was attended with some difficulty. Clinically, it was also difficult to diagnose the condition with certainty during life, unless there was a sinus with a discharge which could be examined. He discussed the mode of infection of the liver. For the cure of these cases both surgical measures and very large doses of iodide were necessary.—Mr. EDRED M. CORNER discussed the mode of origin of streptothrix organisms in the cæcum and the long duration of some of these cases.—Mr. C. S. WALLACE referred to the case of a woman, aged 22 years, who suffered from the malady and was admitted for intestinal obstruction. The disease subsequently recurred and spread to the ovaries. Prior to microscopical examination the case was regarded as tuberculosis of the peritoneum.—Mr. KELLOCK replied.

OBSTETRICAL SOCIETY OF LONDON.

Intra-ligamentous Tumour of the Uterus.—Primary Tuberculous Disease of the Cervix Uteri.—Exhibition of Specimens.

A MEETING of this society was held on Oct. 3rd, Dr. AMAND ROUTH, Vice-President, being in the chair.

Dr. THOMAS W. EDEN and Mr. F. LIONEL PROVIS recorded a case of Intra-ligamentous Fibro-cystic Tumour of the Uterus, weighing 30 pounds, removed by enucleation and subtotal hysterectomy. The patient, who was 55 years of age and unmarried, in January, 1906, attended the Chelsea Hospital for Women, complaining of abdominal swelling and a mucoid discharge from the rectum. The menopause occurred at the age of 48 years. For 11 months she had suffered from an ulcer on the left leg. The abdominal swelling was first observed in 1898 and had increased rapidly of late. External examination revealed a large tumour of elastic consistency reaching up nearly to the xiphoid cartilage and having a smooth surface with a distinct thrill. Per vaginam the cervix was found displaced upwards under the symphysis pubis and a firm swelling rounded in outline and apparently continuous with the abdominal tumour was felt in the left fornix and pouch of Douglas. The position of the uterus could not be made out. A diagnosis of multilocular ovarian cyst with a semi-solid portion in the pouch of Douglas was made. Cœliotomy was performed on Feb. 14th, when the tumour was found to be a fibro-myoma of the uterus spreading out into the left broad ligament and extensively raising the peritoneum from the left lateral pelvic wall and the abdominal parietes. The tumour was enucleated and the uterus removed by subtotal hysterectomy. Up to the ninth day the patient made excellent progress, when she complained of pain in the chest, her temperature rose to 100·4° F., her pulse-rate to 116, and her respirations to 33. A pericardial friction rub was audible at the apex of the heart. In two days the rub had disappeared and the patient continued to make most satisfactory progress. On the twenty-sixth day

after the operation she went to a convalescent home. On the next day she became very ill with vomiting and a temperature of 103°. In 48 hours the vomiting ceased but she remained very weak and was confined to bed with a morning temperature of 102° which fell to nearly normal in the evenings. In this condition she remained for a week, when she had several shivering attacks, in one of which her temperature was 107°; a loud systolic murmur also became audible at the apex, although the heart sounds were previously clear. On March 19th she suddenly became unconscious and developed left hemiplegia. On the following day she died. No necropsy could be made. The immediate cause of her death was apparently cerebral hæmorrhage or embolism, but it was difficult to connect it with the operation. Possibly the ulcer on the left leg might have been the source of an ulcerative endocarditis with secondary cerebral embolism. The tumour weighed 30 pounds and was one of the largest of its kind on record. It was attached to the left lower lateral border of the uterus by a pedicle one inch thick. The uterus measured two and a half inches. The cut surface of the tumour showed a large cystic and degenerating fibromyoma. Microscopical examination confirmed the naked-eye appearances. The extensive cystic degeneration probably accounted for the rapid increase in the growth noticed by the patient shortly before the operation. As the tumour was attached by a distinct pedicle to the uterus it was regarded as uterine in origin, growing out in the left broad ligament.

Mr. ERIC E. YOUNG read a paper on Primary Tuberculous Disease of the Cervix Uteri. The patient was a married woman, aged 26 years, her husband being alive. She was found on examination to be healthy and had had three pregnancies, all the three children being healthy, the last having been born two and a half years ago. The patient had been always healthy. The catamenia were regular up to six months ago; since then the periods had been of longer duration. For five weeks there had been a thick yellow inoffensive discharge from the vagina and there was constant aching pain in the lower abdomen and the sacral region. There had never been any bleeding from the vagina. There was no family history of tuberculosis. On admission the patient was found to be thin and she was nervous and excitable. The lungs were examined on several occasions and invariably they were found to be normal. There were no tubercle bacilli demonstrated in the sputum. Slight tenderness on deep palpation was experienced in the hypogastric and left iliac regions. There was no enlargement of the inguinal lymphatic glands. The cervix was indurated and greatly enlarged; its surface was uneven and ulcerated in places, and in places it was nodular and papillary; it was not friable on examination. The uterus was freely moveable. The suspicious nature of the disease suggested vaginal hysterectomy, which was performed. When examined six months subsequently to the operation the patient was found to be quite healthy. No recurrence of the disease had taken place. Two photographs showed the appearance of the uterus after removal, and contained in the paper were a report by the Clinical Research Association and one by Dr. Williamson, the former stating that the lesion might be of tuberculous origin, and the latter expressing no hesitation in affirming the case to be one of tuberculosis of the cervix. Mr. Young then furnished the results of his inquiries into the literature upon the disease and summed up the conclusions to be deduced therefrom in the light of the history of reported cases and of the examination and treatment of the present patient. He then discussed the nature of the case now presented and the difficulties attending a differential diagnosis. The rarity of the disease, its etiology, pathology, symptoms, and treatment were briefly discussed.—Dr. ROUTH said that Mr. Young's paper would lead gynæcologists to modify their opinion as regards the relative frequency of primary tuberculosis of the Fallopian tube as compared with that disease primarily affecting the cervix uteri.—Dr. ARTHUR LEWERS said that the case recorded was in some respects similar to one which he had himself communicated to the society some years ago.—Dr. ALFRED L. GALABIN said that his experience confirmed what had been said as to the difficulty of distinguishing in some cases between tubercle of the cervix and cancer, especially when tubercle was accompanied by a sanguineous discharge.—Dr. H. RUSSELL ANDREWS and Dr. F. H. CHAMPNEYS also spoke.

Dr. CHARLES J. CULLINGWORTH exhibited a replica of the medal which had been presented to Professor S. Pozzi on the occasion of his having been president of the Seventeenth Surgical Congress held in Paris in 1904, and of his promotion to the grade of Commander of the Legion of Honour.

The following specimens were shown:—

Dr. EDEN: Tubal Pregnancy with Extensive Interstitial Salpingitis.

Dr. R. D. MAXWELL: Volvulus of the Small Intestine leading to Perforation of the Gut and Abdominal Distension causing Difficult Labour.

Dr. RUSSELL ANDREWS: (1) Endothelioma of the Cervix and (2) Complete Prolapse of an Inverted Uterus.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on Oct. 5th, at which Dr. J. T. Conner, the new President, after thanking the society for the honour that they had done him in electing him, delivered an address on the Present Position of Medical Science. In surveying medical literature the dominant reflection in his mind was the extraordinary accumulation of details and the absence of corresponding unification or establishment of principles—in other words, growth without development. Herbert Spencer had described knowledge of the lowest kind as ununified knowledge, science as partially unified knowledge, and philosophy as completely unified knowledge. Medicine largely consisted of ununified knowledge and therefore of knowledge of the lowest kind. Observations followed observations in endless succession and opinions followed opinions, but the establishment of principles which rose above opinions and silenced discussion made but little progress. In therapeutics this indefiniteness was bitterly felt. When they turned for guidance to the authorities, instead of being told what they should do in such and such circumstances they were told what they might do; they were given a multitude of conflicting suggestions and no definite teaching. Modern research, instead of trying to remove this indefiniteness, simply piled new drugs upon new drugs in bewildering profusion. They were all introduced with claims for remarkable virtues but very few stood the test of time. Turning from the new to the old, he took a remedy as old as civilisation—alcohol. All sorts of experiments that could possibly throw any light upon it had been performed; the clinical experience of its use was enormous; matter that would fill a library must have been written about it. Surely here they would expect definite principles and established doctrine. But they did not find them. Since the time of Todd, who gave huge doses of alcohol in all sorts of diseases, belief in its utility had been diminishing, and in recent years its use had been greatly restricted. Now some authorities even denied that it was a stimulant. Schmiedeberg and other eminent pharmacologists held that it acted on the nervous system as a paralysing agent and not as a stimulant and that it had no stimulating action on the circulation. Experiments with the sphygmochronograph on healthy men had failed to show any stimulating action. In disease, a most important series of accurate observations had been made by Dr. Cabot of Boston with the same result. In a large number of diseases, including typhoid fever, pneumonia, tuberculosis, and chronic heart disease, he gave half an ounce of whisky every four hours for 24 hours and then double this quantity for another 24 hours. He was surprised to find that no definite effects could be demonstrated on the circulation, respiration, temperature, appetite, or secretions. Personally the President had never been convinced of the utility of alcohol as a stimulant. Indeed, the whole doctrine of stimulants in general had always appeared to him unsatisfactory. They were taught that there were two classes of bodies—stimulants and sedatives—by which they could increase or diminish function respectively. But a stimulant given in a sufficiently large dose diminished the function which it at first exalted and eventually paralysed it. Similarly a sedative given in a sufficiently small dose at first stimulated the function which it afterwards diminished. Thus these bodies did not form two distinct series. He thought that the law might be enunciated, "Every stimulant is a sedative and every sedative is a stimulant." It was generally taught that when respiratory failure was threatened—e.g., in bronchitis or pneumonia—respiratory stimulants, such as strychnine or atropine, might be useful and cause renewed effort of the respiratory system. He doubted this. The doctrine took no account of the reaction or stage of sedative action which followed stimulation. Further, what indication was there for stimulation at all? The cyanosed patient was breathing for his life at double or

treble his normal rate. The failing respiration was stimulated to the utmost. What was wanted was not more stimulation but energy to respond to stimulation. If respiratory stimulants could not only evoke the manifestation of energy but add to the energy of the respiratory system their use would be rational. But there was no evidence that they could. As another example of the indefiniteness of medicine the pathology of gout was taken. It had been investigated by hundreds of authorities. To follow the discussion a special training in the chemistry of the subject was required. The end of it all was that no one knew anything of the pathology of gout, not even whether uric acid was a cause, concomitant, or consequence. Still any day they might be confronted by a very learned article in one of the journals on the pathology of gout, written by a gentleman who did not know. He would give nearly a whole page of bibliography in which he quoted all his predecessors, who also did not know, though they thought a great many things. They could all give as good, or as bad, reasons for what they thought. And so this futile procession went on. The workers of the day revelled in discussion; the word was blazoned large at congresses and societies without apparently any consciousness that it was a confession of impotence. If anyone was capable of establishing the truth there would be nothing to discuss. The less that was known about a subject the more could be, and usually was, said about it.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Oct. 4th, Dr. W. C. Chaffey, the President, being in the chair.—Dr. Walter Broadbent showed a woman, aged 46 years, with Hodgkin's Disease, the glands in the neck, axillæ, and mediastinum being much enlarged, also the liver, but not the spleen. He also showed a man with Incipient General Paralysis; the pupils were large and unequal and did not react to light; the knee-jerks were absent; there were tremor of the lips and tongue and loquacity but no delusions.—Dr. E. F. Maynard showed a man with Cerebellar Gait, tending to fall to the left, left facial paresis, and weakness of the muscles supplied by the left fifth nerve. The patient had improved considerably under large doses of potassium iodide.—Dr. D. G. Hall showed a man with marked Cerebellar Gait, tending to fall to the right; he had also occipital headache and optic neuritis, accompanied by some vomiting. No improvement had taken place under iodides. Dr. Hall also showed a specimen of aortic aneurysm, which had ruptured into the lung and from there into the pleural cavity.—Mr. V. T. Greenyer showed two specimens of Cancer of the Lung, the first undoubtedly primary, as no other growth was found elsewhere; in the second the examination had been limited to the thorax. In both cases the most striking symptom had been a cough brought on by the taking of food or drink, which always produced vomiting. In both there had been pleurisy and also blood-stained expectoration.—Mr. G. Morgan read a paper on his last 12 cases of Intussusception, on nine of which he had operated successfully. He said that success depended on early diagnosis and rapid operation. If the intussusception could not be completely reduced he advocated making a temporary artificial anus, instead of immediate resection which was so fatal in the collapsed state of the child. He thought that injections of air or water were dangerous and generally useless.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—The inauguration of the twenty-fifth session of this society took place on Oct. 5th, when the President, Dr. Leonard P. Mark, gave a most interesting address on Art and Medicine. We hope to publish an abstract of this address in a future issue. A large number of members and friends were present, including the President of the Royal College of Surgeons of England. Dr. Mark, after thanking the society for the honour which they had conferred upon him by electing him their president, said that medicine had found a place in art since the earliest dawn of civilisation and medical details had had to be represented in painting and sculpture just as well as details connected with other sciences or with sport, navigation, and the art of war. He then proceeded with his address which was illustrated by lantern slides.

FRENCH MEDICAL COMMISSION.—M. Clémenceau, the French Minister of the Interior, has commissioned Dr. Darier to report upon the arrangements in German universities for instruction in ophthalmology. He has also intrusted Dr. Platon of Marseilles with a similar mission concerning instruction in gynæcology.

Reviews and Notices of Books.

A Manual of Midwifery. By THOMAS WATTS EDEN, M.D., C.M. Edin., F.R.C.P. Lond., Assistant Obstetric Physician and Lecturer on Practical Midwifery at Charing Cross Hospital. With 26 plates and 233 illustrations in the text. London: J. and A. Churchill. 1906. Pp. 578. Price 10*s.* 6*d.* net.

IN writing this book Dr. Eden has attempted to set forth a concise account of the present position of the theory and practice of midwifery by dealing with every question briefly and, so far as possible, from a practical point of view. Part I. is concerned with normal pregnancy. It contains a most admirable description of the implantation of the ovum in the uterus based upon the most recent researches on the subject. The differences between the development of the amnion in man and in the chick are clearly described and the difficult question of the part played by the ventral stalk in the human ovum is explained. In the chapter on the Anatomy of the Gravid Uterus good use is made of the knowledge obtained by a study of frozen sections.

In Part II., dealing with abnormal pregnancy, are discussed, first, the disorders of pregnancy and, secondly, the disorders associated with pregnancy. The author adopts the toxæmic theory of the origin of both eclampsia and of the pernicious vomiting of pregnancy, pointing out, however, that in view of our entire ignorance of the nature of the toxic bodies involved in the causation of these two diseases our knowledge is not likely to increase very fast, as until these bodies have been isolated further information will be difficult to obtain. The section dealing with the Pathology of Blood Moles and Hydatidiform Moles is especially good. The description of the development of the intra-uterine blood mole is based upon the researches of Couvelaire in the case of tubal moles. In discussing the clinical features of the hydatidiform mole Dr. Eden is perhaps rather too dogmatic in some of his statements. For example, he says that the uterus is not tender in this condition and that the fœtal heart sounds are never heard. Neither of these statements is strictly accurate. Indeed, as the author points out, a hydatidiform mole may be met with in a case of twins, in which case the fœtal heart is not uncommonly heard. Nor is it entirely unknown for a partial degeneration of the chorion to be associated with a living fœtus. In the section on Extra-uterine Gestation the statement of Bland-Sutton is traversed that the formation of a tubal mole is due to blood extravasated from the circulation of the embryo. There can be no question that this view is an erroneous one and it has been disproved by the observations of several writers on this subject. The chapter on Abortion contains a clear account of the anatomy of this condition and is illustrated by some good drawings.

Part III. deals with normal labour, including its anatomy, physiology, mechanism, and management. The description of the mechanism of labour we can especially commend; it should be intelligible to the dullest student.

In Part IV. the various conditions comprising abnormal labour are considered. In the treatment of unreduced positions of the occiput and face the method of introducing the hand into the vagina and rotating the head whilst the trunk is rotated by abdominal manipulations is recommended. We are glad to see that Dr. Eden does not advise attempts being made to convert a face presentation into a vertex by flexing the head before rupture of the membranes. In discussing the treatment of cases of contracted pelves the author remarks that it is one of the conventions of obstetric teaching that labour in flat pelves should be terminated by version rather than by the use of forceps. He quotes statistics to show that this teaching is not practically

sound. Since the introduction of the modern forms of axis-traction forceps many teachers of midwifery, however, have abandoned this teaching, and it is commonly taught at the present day that the use of these forceps is preferable to the performance of version in such cases. In the section on the treatment of post-partum hæmorrhage we think that the author has scarcely laid enough emphasis on the great value of a hot douche in arresting the hæmorrhage. We are told that unless a trained nurse is present who can prepare the douche it should not be used. We fancy that many practitioners have saved the life of a patient suffering from post-partum hæmorrhage by the use of a hot douche without the assistance of a trained nurse.

In Part V., on the puerperium, there is an exceedingly good account of the etiology and pathology of puerperal fever. On p. 372, in the section on vaginal douching, we find the curious statement that a solution of iodine of the strength of one drachm of the tincture to one pint of water is devoid of antiseptic properties. To those obstetricians who within quite recent years were accustomed to use a solution of this strength or of the strength of two drachms to the pint for vaginal and intra-uterine douching, and even for the sterilisation of their hands, this assertion will be a surprising one. In reality, iodine is a very powerful germicide. It has been shown that in the strength of one part of iodine in 160,000 parts of water it will kill the bacillus typhosus and the vibrio choleræ, while a solution of the strength of one part of iodine in 16,000 parts of water will kill the staphylococcus pyogenes in one minute. Tablets, indeed, are in use for sterilising water for drinking purposes which depend for their action on the liberation of iodine and which were used with good results by the recent mission to Thibet. A solution composed of one drachm of the tincture to one pint of water contains one part of iodine in every 6400 parts of water and is therefore well within the strength which has been shown to be bactericidal to the staphylococcus pyogenes.

The last two portions of the book are concerned with the newly born child and with a description of the various obstetric operations.

We have nothing but praise for this work; the author has succeeded admirably in his task and we can cordially recommend it to students and practitioners as a most excellent text-book. The illustrations, on the whole, are good, although some of those in the text cannot be commended from the artistic point of view. We notice that the author has carefully recorded the source of his illustrations in those cases in which they have been taken from other works. This is a custom with which we quite agree, but at the same time we think that care should be taken to refer to the original source, not merely to the particular book from which the picture happens to have been borrowed. For instance, Fig. 26, of the gravid uterus at the end of the second month, is referred to Edgar's work on Obstetrics. On looking up the illustration in his book we find that he refers it in his turn to Schüffer, whereas actually it is taken from the classical Atlas of Braune and is of great historical importance as a drawing of one of the first frozen sections of early pregnancy, having been published so far back as 1872. In the same way Figs. 223 and 226 are again referred to Edgar; they are in reality, however, modified copies of the original illustrations in the famous and historical paper of Braxton Hicks on Combined External and Internal Version in Vol. V. of the Transactions of the Obstetrical Society of London. Several other examples of the same kind could be quoted from the book; an interesting one is Fig. 41, which, by the way, is imperfectly described, the bladder being not only distended but also ruptured, to which the name of Webster is appended. The original illustration of this very important case is to be found in a paper by Arnold Schwyzer in the *Archiv für Gynäkologie*, Band XLI., Table VIII., Fig. 1. If references to illustrations are given, then just as much care, in our opinion, should be taken to verify them as is done in the case of a quotation from another book or from an original paper.

The Diseases of the Nose and its Accessory Sinuses. By H. LAMBERT LACK, M.D. Lond., F.R.C.S. Eng., Surgeon to the Throat Department of the London Hospital, &c. London: Longmans, Green, and Co. Pp. 399. With 124 illustrations. 1906. Price 25*s.*

HIS Jacksonian Prize Essay of 1899 has been skilfully utilised by Dr. Lack as the foundation of this book, though amplified and made wider in scope. The first chapter is devoted to a study of the anatomy and physiology of the nose and its sinuses; the second to a short account of the methods employed in the examination of patients suffering from intranasal disorders; and the third chapter briefly deals with "some general considerations of treatment." In it we notice that Dr. Lack figures a round rubber syringe for the use of patients, an instrument quite impossible to keep clean or to examine. The directions respecting local anæsthesia are particularly practical and clear. Chapter IV. on Nasal Obstruction has been written with great care but at the same time emphasises the extreme specialist view—for example, is it clear that a highly vaulted palate has been proved to be due to nasal obstruction? Nor do we think that Dr. Lack's arguments are quite convincing. The remainder of the chapter, however, is very instructive. Foreign bodies in the nose occupy a short chapter (Chapter VI.). Affections of the septum and their appropriate treatment receive a rather curt dismissal with 21 pages forming Chapter VII. In Chapter VIII. acute, and in Chapters IX. and X. chronic rhinitis are well and clearly described. Chapter XI. is, however, the most interesting in the book, as Dr. Lack by his investigations fully supports those who considered Woakes correct in his description of ethmoidal disease and nasal polypus in the main though faulty in nomenclature and in some of his pathological deductions. Syphilis, tuberculosis, lupus, and rhinoscleroma take up Chapter XII. Of the remaining 12 chapters Dr. Lack devotes eight to sinus disease—none too many, excellent though they are—and one each to neuroses, tumours, the post-nasal space, and lastly an appendix.

Viewed as a whole the work deserves commendation; more especially we can praise the parts on rhinitis and sinusitis. But it is unequal in value, septal surgery and pathology deserving greater attention; moreover, the description of fibrous rhinitis would be improved by fuller mention by Dr. Lack of the views of his opponents. The book, however, will doubtless prove acceptable and useful to senior students and practitioners as a work of reference, more especially with regard to sinus disease.

Toxines and Antitoxines. By CARL OPPENHEIMER, M.D., Ph.D. Translated from the German by C. AINSWORTH MITCHELL, B.A. Oxon., F.I.C. London: Charles Griffin and Co., Limited. 1906. Pp. 274. Price 7*s.* 6*d.* net.

THE author's object in writing this work was, he tells us, "to bring together all that was known on the subject of toxines, the definition of a toxine being based on chemical grounds and on the side-chain theory, quite independently of the origin of the poison." The word toxin is thus used in the restricted sense recently given to the term, by which it is applied only to those poisonous substances which have the property of giving rise to antitoxins in the animal economy. Whether this restriction of a term already in use was legitimate or commendable is at least open to question but the usage appears to be gaining acceptance. The book accordingly deals with certain bacterial poisons—namely, those of diphtheria and tetanus, of botulism and pyocyanic infection, with some hæmolysins formed by bacteria,

with the vegetable toxins, ricin, abrin, &c., and with some animal poisons such as snake-venom and spider-poison. The poisonous principles which are encountered in connexion with the bacteria of typhoid fever, cholera, plague, and pneumonia are also discussed, though the formation of true toxins, in the sense above indicated, is not certainly demonstrated in the case of these organisms. In the opening chapter a full account is given of the work which has been done by Ehrlich and others in investigating the nature and relations of toxins and antitoxins, and due consideration is paid to the work of Arrhenius and Madsen who endeavour to apply recognised chemical principles to explain many of these phenomena. The book affords a most useful summary and impartial discussion of a vast amount of scattered original work. An index of authors referred to occupies nearly 18 pages and bears eloquent witness to the thoroughness of Dr. Oppenheimer's literary investigations. The translation, too, is well done; it is only here and there that such a phrase as "the formerly so inscrutable problem" reminds us of the German original. A few errors, such as "intercerebral" for "intracerebral" occur and it seems a pity that in a translation for English-speaking people typhoid fever should throughout be termed typhus in accordance with German usage. But the blemishes are trifling and the merits of the volume manifold.

LIBRARY TABLE.

British Rainfall, 1905: On the Distribution of Rain in Space and Time over the British Isles during the Year 1905. By HUGH ROBERT MILL. With Maps and Illustrations. London: Edward Stanford. 1906. Pp. 271. Price 10*s*.—This book, the forty-fifth annual volume, is issued at a somewhat later date in the year than its predecessors, "but the growing mass of data to be dealt with and the greater detail now given in the various discussions make it increasingly difficult to accelerate publication." The volume is divided into two parts. Part I. contains: (1) A Report to the Observers; (2) Original Articles, dealing with a Remarkable Publication of Rainfall Data in Germany, and with the Relation of Evaporation to other Meteorological Phenomena; (3) Tables of the Amount of Evaporation at 11 Stations, of the Duration of Rainfall at Eight Stations, and of the Complete Daily Observations of Rainfall at Ten Stations; (4) An Account of the Staff of Observers and of Changes in the Stations at Work; and (5) a Long Obituary List. It is the aim of the author to put on record the name of every observer who has died since the issue of the previous volume, with a note of the services rendered to the rainfall organisation and the addition of biographical facts of interest. Amongst the 62 names which fill the obituary list this year, 13 observers had kept observations for 30 years or more. In Part II. the conditions of 1905 are exhaustively treated as to (6) Observers' Notes on the Rainfall and Weather; (7) Heavy Falls of Rain, their Distribution over the Country and their Relation to Atmospheric Disturbances, with several Maps; (8) the Distribution of Rainfall in Time, including the Number of Rain Days classified according to Amount of Fall, Droughts, and Rain Spells; (9) the Monthly and Annual Rainfall in Relation to the Average; and (10) the General Table, giving the names of all observers or responsible authorities, particulars as to position and exposure of the rain gauges, the total annual rainfall, and the number of rain days. The author records an increase of more than 100 observers in the year and the number of stations from which returns are now published exceeds 4000. There is a useful map showing the distribution of rainfall stations and a list of places is given at or near which new rainfall observers are specially wanted. A large proportion of the observations on which the work is based has been contributed by medical men and it would be very helpful to the improvement of our knowledge of the rainfall conditions if interest could be stimulated in remote localities. As the members of our profession are so widely distributed we further recommend the subject to the notice of those who are practising in districts which are more than ten miles from the nearest rain gauge.

Sweden. Edited by the Swedish Touring Club. With 17 maps and seven plans. London: Thomas Cook and Son. 1906. Pp. lxiv.–238. Price 4*s*. net.—We welcome the appearance of the second and revised edition of this little work. The book has been prepared with a view to insure its being recognised as the standard guide to Sweden. It is edited by the Swedish Touring Club and the materials for it have been collected at the instigation and cost of the club during a series of years. Not all the sights and features of interest in Sweden are mentioned here; the scope of the work has been purposely restricted to such sections and features as are calculated, by reason of facilities afforded both of communication and of accommodation, to enable the traveller from foreign parts to see without too great an expenditure of time, exertion, and trouble the main characteristics of the country, what natural beauty it possesses, what industries it supports, how its people live, their present status in civilisation, and their records of the past. This new edition has been corrected, altered, and added to, so as to include the new lines of communication that have been opened. It appears to us to be an excellent guide to a country in which a delightful holiday can be spent. The maps are very good.

Diseases of the Urethra. By P. CLENNELL FENWICK, M.B. Lond., F.R.C.S. Edin. Melbourne: James Little. 1906. Pp. 139.—Dr. Fenwick offers this volume to his medical colleagues in Australia as a fellow general practitioner who has often found it necessary to refer to several books on general surgery before he obtained required information. The object of the book is to give in a simple concrete form all the necessary information on the varieties of urethral disease which the general practitioner usually has to treat. Dr. Fenwick has certainly produced a capital little book and one which will prove helpful. All questions in connexion with urethral disease are considered and the treatment is thoroughly gone into; the prescriptions for the drugs recommended are given in full. A few pages are devoted to tumours of the testicle; we note that cysts of the cord are not mentioned. The book is illustrated with explanatory diagrams. The arrangement of the subject matter and the printing of the little book are both good.

Manual of Anatomy, Systematic and Practical, including Embryology. By A. M. BUCHANAN, M.A., M.D., C.M.Glasg., F.F.P.S. Glasg. Vol. I., Osteology; Upper Limb; Lower Limb. London: Baillière, Tindall, and Cox. 1906. Demy 8vo, pp. 596; 266 illustrations. Price 12*s*. 6*d*. net.—It is no easy task to combine systematic and practical anatomy, together with embryology, in a readable manual of moderate size. The result is bound to be uninspiriting in consequence of the compression to which the matter is subjected. Dr. Buchanan has hardly escaped the perils of his venture. Nearly half this first volume treats of osteology, the remainder being devoted to the anatomy of the limbs. As might be expected from the space given to it, the section on osteology is more exhaustive than those which follow it and, as a matter of fact, it forms the most satisfactory portion of the volume. The method of description adopted in treating the anatomy of the limbs is regional, the parts being described in the order in which they are met with on dissection. The account of the soft parts is less detailed than that of the bones. We doubt if the descriptions, although sufficiently accurate, will do more than meet the requirements of examinations where the standard is not very high. At the end of the description of the anatomy of

the upper limb is a guide to its dissection. This is not illustrated and is compressed into 12 pages of uncomfortably small type. We much question its utility in the form in which it now appears. In like manner a directory of 17 pages is provided as a guide to the dissection of the lower limb and to this the same remarks apply. The only embryology which we can find in this volume consists of the ordinary descriptions of the ossification of the various bones. The book is printed on thin paper and is well illustrated by drawings by Mr. James T. Murray of Edinburgh. A fairly free use has been made of colours to indicate muscular attachments, vessels, nerves, and the positions of various synovial sacs.

Hand-Atlas of Human Anatomy. By WERNER SPALTEHOLZ, Extraordinary Professor of Anatomy in the University of Leipsic. Edited and Translated from the fourth German edition by Professor LEWELLYS F. BARKER of the Johns Hopkins University, Baltimore. Second edition in English. London and Philadelphia: J. P. Lippincott Co. Three vols., 872 pages in all. Net price complete £2 2*s.*—The atlas of Professor Spalteholz deservedly occupies a prominent position among publications of this class and we are not surprised to find that a second edition of the English translation has been called for. This edition differs very little from the first which we have already commended in these columns. Some of the explanatory outline diagrams now appear in colours which render it more easy to distinguish the constituent elements. We again strongly recommend this atlas to the attention of those interested in anatomical illustration and it will prove useful to students at all stages of their career. The publishers would do well to adopt a cover less likely to be damaged by moisture and grease.

Illustrations of British Blood-Sucking Flies. With Notes by E. E. AUSTEN. Printed by order of the Trustees of the British Museum. London. 1906. 34 Plates. Pp. 74.—This volume is illustrative, as the director of the museum, Dr. Ray Lankester, informs us in the preface, of some exceedingly fine drawings by Mr. Terzi which are exhibited in the North Hall of the South Kensington Museum of Natural History. There are also on view, as further aids to the perusal of Mr. Austen's work, models of certain flies and the parasites which they convey to man and to other animals. This method of museum management is truly to popularise science; and it is to be wondered at and regretted that the director must cease from this useful work, since he has reached the first age limit which allows of his services to be dispensed with. Mr. Austen's volume is important, not only on account of its own intrinsic merit as an exposition of the subject with which it deals but also since it is representative of a new and praiseworthy departure in the form of the publications of the British Museum of Natural History inaugurated by the present director. This is duly emphasised by a different sized page and by a cloth cover of an unfamiliar hue. Mr. Austen is so well known an authority upon the diptera, or two-winged flies, that it was unnecessary to seek outside the museum for assistance in preparing this volume. It contains an account, variable in length according to the species, of a considerable number of flies found in this country which attack men or animals. Nearly all the species which are described are figured. Probably it will surprise many to learn that this country harbours no less than 74 species of flies which are blood-suckers by habit. But in view of the fact that, according to Mr. Austen, the total fly population of Great Britain amounts to 3000 different kinds, the proportion of venomous members of this huge assemblage is not so large. And in ordinary life man is not a great deal troubled by them. Mr. Austen has done us a considerable service in bringing together his notes upon these insects and the book should commend itself to others besides entomologists.

The Cathedrals and Churches of the Rhine and North Germany. By T. FRANCIS BUMPUS. With 84 Illustrations and a Map. London: T. Werner Laurie. 1906. Pp. 356. Price 6*s.* net.—At this season, when physician and patient alike have just returned from seeking the rest which is so necessary in this high-pressure age, the author's purposely chosen track out of the beaten roads will commend itself to those who want a reposeful holiday in unfamiliar yet deeply interesting localities. The principal places dealt with are Münster, Soest, Paderborn, Hildesheim, Halberstadt, Magdeburg, Naumburg and Erfurt, and Cologne, with digressions on the churches by the way. One peculiarity will strike the reader, but not unpleasantly. The author, like Dickens, Johnson, and other eminent Englishmen, cannot get away entirely from his native land. He is constantly comparing these magnificent foreign fanes with our English cathedrals and where the latter excel in some point sturdily maintaining his preference for them. Thus, of Cologne (to which he devotes a whole chapter, full of information) he says that the fact of its being begun, continued, and ended in one particular period of pointed architecture must preclude it from competing as a poetical composition with Canterbury and York, Ely and Gloucester, and that measurements alone check him in adding Lincoln. He is, however, full of enthusiasm for the foreign minster, but *more suo* he must quote two Englishmen to share it with him—Tom Hood and Wordsworth. Elsewhere, in contrasting the obtrusiveness of some garish modern glass (hugely admired by the uncultivated) in one part of the cathedral with the quiet true art of some lovely old glass in another, he likens the former to the "poisonous hues" of Berlin wool as compared with the delicate "slacks" and "crewels" of the old English samplers. Glass, organ cases, metal work, music—art, in short, in its every shape and form—are dealt with exhaustively, yet withal in a genial, gossipy manner, together with history and the scenery on his journeys and he is particularly enthusiastic and informing about the chorale singing in the German churches. The illustrations are very fine and the bibliography is very full, while the *plans de route* comprise both the familiar and the unfamiliar roads to a district which is rich in beauty and in historical associations.

The Birds of the British Islands. By CHARLES STONHAM, C.M.G., F.R.C.S. Eng., F.Z.S. With illustrations by L. M. MEDLAND. In 20 parts. London: E. Grant Richards. 1906. Parts 1 and 2. Price 7*s.* 6*d.* net each.—We have before us Parts 1 and 2 of the new book upon British birds by Mr. Charles Stonham, who with his duties of senior surgeon to the Westminster Hospital combines the knowledge of an expert ornithologist. So far we think the book is simply admirable and although in the illustrations there is no standard of comparison of the size of the bird yet in the description of every plate the average measurements of the bird are given. Mr. Medland's illustrations are most beautifully drawn, and although in our preliminary note on the book published in our issue of March 3rd we expressed our doubts as to whether he could differentiate all the varieties without the aid of colour, yet he has been remarkably successful. For instance, in Part 2, the various warblers—i.e., the birds of the sub-family Sylviadæ, many of which are very much alike—are wonderfully differentiated. Persons who study Mr. Medland's beautiful illustrations will probably be able to say with a fair amount of confidence whether a little greenish-grey bird which they see is a chiff-chaff, a willow-wren, or a wood-wren. Altogether we congratulate both Mr. Stonham and his illustrator.

THE LANCET.

LONDON: SATURDAY, OCTOBER 13, 1906.

Belfast and its Medical Officer of Health.

WITH a population of some 350,000, with enteric fever endemic, with the history of a recent outbreak of typhus fever, and with a death-rate (in 1904) of no less than 41 per 10,000 from tuberculosis, the corporation of this city, with its eyes open and with an appeal from a public association urging it to act aright still ringing in its ears, has apparently committed an error of judgment which will be remembered in the annals of Belfast to its lasting discredit as a corporate body. It has elected as its medical officer of health an ex-councillor who is without any public health experience and who "only got the diploma [of Public Health] on the eve of his retirement from the council in order to become a candidate." In the opinion of one of the leading Belfast papers it was the fact of the elected candidate having been a city councillor which "was the determining factor in the business." If this be so we may well ask with the Belfast journal referred to, "What was the use of advertising the vacancy and bringing candidates over from England and Scotland if, as was plainly hinted at by more than one member of the Council yesterday, the majority of the members were already pledged to the support of an intending candidate?" In fact, one of the aldermen is reported to have said at a date prior to the election, "I have been told that Dr. BAILIE has said that he has 35 members of the corporation pledged to his appointment." Our readers are aware that there was also some mistake or error of judgment in the matter of advertising the vacancy, so much so, indeed, that an effort was made to obtain re-advertisement of the post. It is also with much regret that we have to chronicle the fact that one of the medical aldermen of the corporation, Alderman Dr. KING KERR, who is chairman of the sanitary committee, was foremost in promoting the appointment of the ex-councillor medical practitioner, and this in face of the circumstance that there were several well-qualified and experienced medical officers of health as applicants for the post. It cannot, however, be said that the income of £600 which was offered was sufficient to attract many of the foremost health officers in this country, and it is an officer of this standing which the corporation of Belfast should, in our view, have sought to obtain.

But another remarkable incident in connexion with the appointment is the fact that the Alderman who proposed in the council the election of his quondam colleague promised the council that if his nominee were appointed "he could assure him of his cordial and hearty coöperation with him in connexion with the health department and he would see that the public and the council should do likewise." The chairman of the sanitary committee, who is clearly a man of influence, notwithstanding his self-reliance seemed to foresee the possibility of some rift within the lute. The about-to-be-elected ex-councillor was therefore told in effect that "if he was a wise man he would rely very largely on the coöperation and assistance and advice of Mr. CONWAY SCOTT," as it was added that "whoever was elected medical officer would be a wise man if he was guided by Mr. CONWAY SCOTT'S advice and experience." In the municipal year book for 1906, under the heading Belfast, we read, "Executive Sanitary Officer, C. SCOTT, C.E." We suppose that this is the Mr. CONWAY SCOTT referred to and according to the chairman of the sanitary committee, "he is one of the ablest and most honest sanitary officers in the United Kingdom." This statement renders the appointment of the ex-councillor more mysterious than ever. He is to be *superintending* medical officer of health and yet he is, if he is a wise man, to do nothing without first consulting "the most honest sanitary officer in the United Kingdom." It would surely have been more to the point to have elected the honest officer to be superintending medical officer and to have placed the ex-councillor under him.

We are glad to be able to record that Councillor WALKER urged that no consideration other than that of the public well-being should weigh with any member of the corporation, and said that the officer about to be appointed had not "had one hour of practical experience in grappling with the problem of public health," and Alderman Sir OTTO JAFFÉ struck the right note when he said that since he entered public life he had made a point of acting in public affairs in the same spirit and in the same manner as he would do if acting for himself and for his own family. He regarded the work of a medical officer of health as a distinct profession—a special branch of medical science—and he thought that they would be wise in appointing someone who had had previous experience of the work. Councillor HENRY was called to order by the LORD MAYOR for protesting "against what was nothing short of a gross scandal," but Councillor WALKER was allowed to say unchallenged that "not merely had no outsider a show but from first to last the whole thing had been a farce—a burlesque." It was even suggested at the previous public meeting that if the council acted contrary to the wishes of the citizens a Royal Commission would be sought for, but it was felt by some that the public prints might afford unpleasant reading on account of the "revelations which might take place regarding insanitary dwellings and other matters." But although we think that a Royal Commission might prove of signal service it would, perhaps, be more to the point to establish with the money which such a commission would cost a "school for ethics" in Belfast at which all would-be councillors and, we are afraid we must add, aldermen should be compelled to procure a diploma before practising on the public as members of the council. But as this school may not at once exercise its influence we will hope that a regulation may be promulgated to the effect that in future no alderman or councillor shall hold a paid office under any local authority unless at least five years have elapsed since the date of his retirement from the council.

Natality and Fecundity.

THE recent unprecedented and continuous decline in the productivity of the population, not only at home but in our colonies, has at length arrested public attention as a national calamity seriously threatening the future of our race. The cause of this decline has now become the subject of attentive study by scientific men, both here and abroad, and much space is being devoted to its discussion in the public press, lay as well as medical; and if, as we believe to be the case, the result has hitherto proved unfruitful, this is mainly because of the absence of the statistical evidence which is obviously indispensable. In these circumstances we welcome the publication of a book on "Natality and Fecundity"[1] by Dr. C. J. LEWIS and Mr. J. NORMAN LEWIS, F.I.A., of Edinburgh, which has been undertaken with the object of providing material for the discussion of the productive ability of the Scottish people. Having carefully read this book we do not hesitate to describe it as the most valuable contribution to Scottish demography that has hitherto appeared; and although it exposes the present nakedness of the land in regard to registration details the book supplies trustworthy and unique information with respect to the year 1855, of which the authorities in Scotland as well as in other parts of the United Kingdom would do well to take timely heed. As a nation we are prone to tolerate without complaint the persistence of demonstrably imperfect methods so long as they do not lead to actual disaster. For this national complacency of ours the present writers seek to substitute, in relation to the matter in hand, that wholesome degree of discontent which in other matters of public policy and in all ages of the world has proved the harbinger of true progress. The year 1855, which saw the establishment of birth registration in Scotland, was necessarily chosen for study because in that year alone was Scottish birth registration carried out in sufficient detail for statistical purposes. It will be remembered that in the year 1871 the late Dr. MATTHEWS DUNCAN published a work on "Fertility, Fecundity, and Sterility," which at that time attracted much attention in the medical profession. Dr. MATTHEWS DUNCAN accomplished, however, but a partial examination of the registers of Edinburgh and Glasgow alone and accordingly his conclusions, interesting and useful as they were, are obviously less trustworthy than those of the present writers who have dealt with the entire population of Scotland. It is to amplify the results of Dr. MATTHEWS DUNCAN that the present laborious research has been undertaken.

In the introduction we are informed that in 1855, which, as we have said, was the first year of Scottish birth registration, the registers contained the following particulars with respect to each birth: as to the child—the name, age, sex, date and place of birth; as to the father—his name, occupation, age, and birthplace, the date of his marriage, and his issue living and dead; and as to the mother—her name, age, birth-place, and the order of her children at birth. Unfortunately, it was for one year only that the births were recorded in this complete form, the schedules for 1856 being modified to such an extent as to be almost worthless for purposes of demographic study. The writers justly censure the authorities for their parsimony and want of public spirit and they affirm that "the loss sustained by the science of vital statistics in this alteration of the schedule is incalculable—so valuable would the information have been had it been extended over a series of years." It is probable that in 1855 returns of this kind were estimated in Scotland no more highly than in regions south of the Tweed, where the statistical and demographic importance of data such as these is only tardily coming to be appreciated, even at the present day. We trust that this book will further stimulate the discussion on this important subject now taking place in learned societies both in England and elsewhere; and if the reproach levelled at the Scottish authorities—not, be it remembered, by strangers but by their own countrymen—should effect the extension to the United Kingdom of that completeness formerly and exceptionally achieved in the birth-records of its northern division we feel that the strictures alluded to will have been amply justified. The value of the present work is much enhanced by the circumstance that its authors have taken pains to define very satisfactorily certain of the terms used by them in its composition. Among these terms "fecundity" and "fertility" are often confounded or are used ambiguously. Yet they are not synonymous but denote different aspects of productive ability. In the estimation of the fertility of a population all the births produced in a given time are included. That is to say, twin and triplet births are counted as two and three respectively, and not as one birth. On the other hand, in the estimation of fecundity the birth "transactions" alone are considered, plural births having no more weight than single births. In short, the terms "fertility" and "fecundity" both refer to the ascertained fact of productivity; but whereas fertility means the *quantity* of ascertained productiveness fecundity means its *quality*.

The book before us deals with the Scottish statistics of birth, both legitimate and illegitimate, in a single year in the middle of last century, so that although the actual details of natality are highly instructive as showing the kind of information that can be derived from a competent analysis of the records, they nevertheless refer to a date too remote to be particularly interesting at the present day. Very ably have the facts been marshalled to show the fecundity as distinguished from the fertility on the one hand, and the sterility on the other, of the Scottish people in the year 1855. Their initial and subsequent fecundity, their primary and total fertility, the order of birth of the children, and their average number to each marriage, are set forth in such a way as to afford the maximum amount of instruction. To these details we cannot do more than allude at the present time, but they may profitably be studied in the book itself which undoubtedly deserves a wide circulation. There are, however, one or two points of more than ordinary importance to which particular reference must be made. The writers are fully aware that in comparing Scottish data respecting natality with those of foreign countries, and indeed of some of our

[1] Natality and Fecundity, by C. J. Lewis, D.Sc., M.D. Edin., and J. Norman Lewis, F.I.A. Edinburgh: Oliver and Boyd. Pp. 170. Price 7s. 6d. net.

own colonies, we are seriously handicapped by the circumstance that stillbirths are not registered in these islands, the United Kingdom standing practically alone in this respect among the nations of Europe. The birth registers of Scotland include only living children, most of whom would be born at the full time of pregnancy and be endued with definite viability. This detail the writers regard as important in connexion with any comparison of their figures with those of other countries in which stillbirths are registered and counted. As no information concerning abortions is available and as stillbirths have never been registered in Scotland wives who become pregnant but do not succeed in bearing a living child are in these statistics classed as sterile. They are not, however, really sterile and yet they do not add a living unit to the population. The importance of this consideration in regard to the question of fecundity and sterility will be duly appreciated by our readers. As regards the interval by which marriage precedes the birth of a first child the writers affirm that in Scotland this period is frequently curtailed and, in fact, is non-existent. The law whereby children born before marriage are "legitimated" by the subsequent marriage of their parents accounts in part for the frequency with which the birth of the first child precedes matrimony. The occurrence of numerous cases of first birth within seven months of marriage evidences the custom in certain classes of society of postponing marriage until after the achievement of pregnancy. Analysis of the details concerning 16,176 mothers of first-born children in 1855 shows that in 1·8 per cent. the birth preceded marriage and that in 21·3 per cent. the birth occurred within seven months of the marriage. An additional 15·5 per cent. of mothers had their first-born children within from seven to nine months of marriage and many of these children must have been conceived before marriage. So that, the writers conclude, it is probably within the mark to say that in one-third of the marriages (sterile marriages excepted) the bride had had a child while unmarried or was pregnant at the time of marriage. This, of course, refers to the remote past. Whether or not the same statement would be true at the present day cannot be known for the reasons already assigned.

Appendicitis and Boric Acid.

APPENDICITIS has been "discovered" only within recent years, yet we may reasonably claim to know all about this very prevalent disease except its cause. Speculations on the etiology of appendicitis have been rife. In the early days of the disease the presence of a foreign body in the appendix was accepted both by the profession and the public as a frequent cause of appendicitis and the importance of avoiding the swallowing of grape-seeds, orange-pips, cherry-stones, and other similar bodies was earnestly inculcated. We now know that many (if not most) of these "foreign bodies" were merely fæcal concretions, though they simulated very closely the pips and seeds of various fruits. True foreign bodies are rarely found in cases of appendicitis, although they certainly sometimes occur. Pins of all kinds seem to be the most frequently met with, but fish-bones, bristles, spicules of meat-bone, and small shot are occasionally seen. Yet all these are merely assisting causes; of themselves they do probably but little. There is much evidence that these foreign bodies may lodge for weeks or months in an appendix without producing any obvious effect until some other factor takes part. In one case two years elapsed between the swallowing of the pin and its appearance in an appendicitic abscess. The anatomical structure of the appendix contributes in no small degree to the likelihood of the occurrence of inflammation. A blind dependent portion of the alimentary canal is certainly liable to have stagnant contents and its limited blood-supply will still further assist in the production of inflammatory processes. More important than all these causes is the invasion of bacteria. Without microbic assistance even the foreign bodies will be capable of doing little harm and the stercoliths will prove innocuous. To the bacterial infection of the appendix the appendicitis is really to be ascribed. Yet when we have acknowledged the importance, or even the necessity, of the microbic invasion for the production of an appendicitis we have not even then accounted fully for the disease. Bacteria such as are found in an inflamed appendix or in an appendicitic abscess are nearly always present in numbers in the contents of the cæcum. There must be some cause, some reason, why the hitherto unaffected tissues are suddenly invaded by these ever-present microbes. This exciting cause in some cases is definitely trauma. A direct blow or more frequently a great exertion, as lifting a heavy weight or walking a great distance, has immediately preceded the attack of appendicitis and we are certainly justified in regarding the trauma as the true exciting cause in most, at least, of these cases. Yet many cases remain in which, even with the most careful inquiry, no history of any trauma can be obtained. In these there is evidently some other factor which will account for the sudden outburst of inflammation. This important factor is to be found, in all probability, in some acute attack of indigestion; and, indeed, in many cases a definite history of such an attack can be obtained. When we proceed to eliminate from this list those cases in which the cause of indigestion is obvious, such as some gross infringement of dietetic rules, we find a residuum is left in which no obvious cause for the indigestion can be discovered. It has recently been suggested that this unknown factor is a chemical substance, introduced into food for the purpose of preserving it and as boracic acid (or as it is better named boric acid) and other compounds of boron are used much more frequently than any other antiseptic the indigestion is attributable to boric acid and to borax.

That of recent years there has been a great increase in the frequency of appendicitis there seems to be no doubt. It is true the disease is diagnosed now much more readily than formerly, but taking this fact into consideration we may still be certain that the disease is definitely more frequently met with than it was 20 or 30 years ago. It is also certain that it is only in recent years that antiseptics, and especially boric acid, have been used systematically in articles of diet. Mr. CAMPBELL WILLIAMS seems to have been the first to suggest that the presence of boric acid in food was possibly the reason, or at least one reason, of the increase in cases of appendicitis. It has been long recognised that boric acid can interfere with digestion, and in 1903 we published an annotation drawing attention

to this digestive disturbance. Mr. REGINALD HARRISON confirmed this statement by a recountal of his personal experience, for even in small doses and taken with milk or butter it had given rise to an acute attack of indigestion. So constant was the association that Mr. HARRISON was able to recognise the presence of boric acid in food by the occurrence of a sudden attack of dyspepsia. We may accept it therefore as proved that boric acid can cause indigestion with the production of much flatulence. Mr. HARRISON has written us a second article, appearing in THE LANCET of Sept. 22nd last, p. 787, in which he argues that this dyspepsia and this flatulence are extremely likely to be exciting causes of appendicitis, for the distension of the cæcum will stretch open the mouth of the appendix and so may enable fæcal matter and micro-organisms to enter it. In the annual report of the medical officer of health of the borough of Stepney similar arguments are used in favour of the assistance which boric acid may give in the production of appendicitis. It may be agreed firstly that boric acid can cause dyspepsia and secondly that a severe dyspepsia may act as an exciting cause of appendicitis. The only link needed is the proof that foods are liable to contain sufficient boric acid to set up an irritative dyspepsia. What quantity of boric acid may foods contain? The Departmental Committee appointed to inquire into the use of preservatives and colouring matters in the preservation and colouring of food issued a report in 1901, though no action has been taken by the legislature to introduce a Bill to carry out the recommendations of the Committee. It was therein suggested that the only preservatives used in butter should be boric acid which should not be used in a larger proportion than 0·5 per cent. In one case examined in Stepney there was over 1 per cent. of boric acid in butter, and if two and a half ounces of butter were eaten in the day more than 12 grains of boric acid would be taken. Dr. WILEY of the United States Board of Agriculture has come to the conclusion from experiments which he has made that eight grains a day are too much for an average man to ingest regularly. It is, however, not only in butter that we find boric acid, it is found in milk and cream, in ham, bacon, and sausages. So that the total amount of boric acid taken may be very great. In milk especially is it very common. The farmer adds some so that the milk may travel well; the wholesale dealer adds some more that it may not turn while in his possession; and the retailer contributes his portion also. In the *Times* of Sept. 7th there appeared a report of a case in which a Bradford fishmonger was charged with selling shrimps which contained 105 grains of boric acid to the pound. Whether a man is likely to eat as much as half a pound of shrimps, as was suggested by the medical officer of health, we hardly like to determine, but we can well believe that he could take sufficient boric acid to disturb his digestion.

It must be confessed that all observers are by no means unanimous in ascribing harmful effects to boric acid. A few maintain that boric acid and borax exert no harmful influence on the alimentary canal and foremost amongst these is Professor OSCAR LIEBREICH of Berlin. In 1899 he published a treatise on this subject and he made a further contribution in 1902. In these works he adduced much experimental proof that both of these drugs were harmless and he criticised the evidence brought forward against boron compounds. While allowing that some of the cases cited against these substances will not stand examination we do not think he has succeeded in disproving the statement that in many cases boric acid does give rise to disturbance of the alimentary canal. Professor W. D. HALLIBURTON, in giving evidence before the departmental committee appointed to inquire into the use of preservatives and colouring matters in the preservation and colouring of food, stated that the ideal course would be to prohibit all preservatives, and though this is perhaps Utopian the greatest care should be taken that only those preservatives are employed which are likely to do the least harm and the percentage should be strictly limited by law. At the present time many magistrates decline to convict unless the prosecution can bring forward evidence that the amount of preservative found must be injurious to health. This proof is often impossible though the probability of harm following may be very great. Without agreeing that the connexion between the increasing use of boron compounds in food and the increase in the frequency of appendicitis has been proved we may yet acknowledge that the suggestion has much to support it and deserves further examination.

Annotations.

"Ne quid nimis."

THE PREVENTION OF SMOKE IN LONDON AND IN PROVINCIAL TOWNS.

UNDER the above heading in an annotation in THE LANCET of Sept. 29th, p. 887, we drew attention to the appalling state of the air in the manufacturing district known as "the Black Country," lying between Wolverhampton and Birmingham, owing to the constant wanton discharge of black smoke from the factory chimneys which abound in that district. We asked why such a disregard for the purity of the air and for the health of the people living in the vicinity of these smoke-vomiting factories was tolerated by the State. We learn that our remarks have raised some indignant replies from those who are responsible for this abomination. Their defence is that they are exempt from the operations of the Public Health Act, the 334th section of which sets forth that "nothing in this Act shall be construed to extend to mines of different description so as to interfere with, or to obstruct, the efficient working of the same, nor to the smelting of ores and minerals, nor to the calcining, puddling, and rolling of iron and other materials, nor to the conversion of pig-iron into wrought iron, so as to obstruct or interfere with any of such processes respectively." But it is against this exempting clause that we urgently protest. Surely a remedy can be found for this evil which will not seriously interfere with trade interests. We venture to think that if it were proved that these filthy outpourings were a menace to the quality of mining products, foundry products, or any other of the products of the Black Country the nuisance would be speedily abated. The manufacturers' view seems to be that the intense pollution of the air with smoke and noisome smells must be tolerated even at the expense of the public health, because otherwise the industry and with it the labour of thousands must suffer. That is a view to which we cannot subscribe. That smoke can be prevented without putting a stop to

manufacturing processes has been proved by the results obtained by manufacturers elsewhere who show some regard for the health and the well-being of their workpeople. So far as the manufacturers in the Black Country are concerned we were quite prepared to hear that our remarks had fallen upon stony places but none the less we call upon the legislature to rescue those who are obliged to live in such places from breathing every day of their lives an atmosphere made dark, filthy, and loathsome by the outpourings of factory chimneys. We do not exaggerate the picture, for we have received ample confirmation of our remarks from those who have to live amongst these evils and who witness their appalling effects on life and property. The following is an extract from a letter recently received from a correspondent living in the Black Country. He writes:—

> Your most useful article is going to be discounted and the whole matter ignored once again. But the summary of these interviews [our correspondent refers here to certain articles which appeared in the local press] with Midland manufacturers did to my mind most certainly confuse several important issues. It is to confuse our issue (1) to say that any action has been taken in the interest of the health of the community when that action would not have been taken at all if profits had been jeopardised; (2) to say in one place that steps had been taken to cleanse the air and in another to say that smoke-laden air is healthy and therefore needs no cleansing; and (3) to suggest that smoky air and air laden with chemicals is healthy when modern medical science teaches with authority that the best air is pure air. I will endeavour to illustrate by a few examples what occurs here (Oldbury, one of the places mentioned in THE LANCET). With the barometric conditions favourable all cold and smooth surfaces (lamp-posts, &c.) are covered with an iridescent slime (due to the action of sulphuretted hydrogen on the paint). Constantly in walking through the streets one's eyes are bombarded with little drops of hydrochloric acid. One smells chlorine gas, bisulphide of carbon, and various ammoniacal and sulphur by-products. Houses stand right under the chemical chimneys, the paint on these houses turns blue, the nails in their roofs corrode. Frequently the copper in my room turns black in a night and the smell is extremely disgusting. The chief argument in favour of the manufacturers is the low death-rate as compiled by the medical officers. Now it is a strange thing that all the medical men are strongly against the present state of things and never quote the low death-rate as a palliative. They consider that the dirty atmosphere by clogging the lungs decreases vitality and so by a cumulative process renders a man liable to the attacks of disease. It seems to me that this is certainly borne out by the few really old people we bury; by the number of people who die between 60 and 70; by the state of decrepitude into which a man speedily falls if he exceeds the age of 65. I have not put this argument into the form of a statistical table. I would do so if you like. There are plenty of people who would rejoice to see the matter carried further.

ADVERTISING AND DENTISTRY.

THE question of advertising by certain dentists is a constant source of vexation to those who have the welfare of their profession at heart. The British Dental Association has, we believe, on more than one occasion approached the General Medical Council, urging that advertising by registered dental practitioners should be considered "unprofessional conduct." The General Medical Council does not, however, appear to possess the power to prevent advertising except when the advertisement is of an objectionable character and when the individual claims a superiority over other practitioners. There is another type of advertisement which is allowed to run rampant—namely, that in which some claim is made to the invention of an instrument, the circulars containing the information being accompanied by testimonials. A circular of this character has recently been brought to our notice, having been pushed under a layman's door in Bradford. The circular is issued by Messrs. Forshaw and Ellison, dental surgeons, and is the puff of a tooth forceps designed by "Mr. Chas. F. Forshaw, D.D.S. exam." Now this advertisement sheet contains 13 testimonials, of which a dozen are given by medical men, and in nearly all cases the qualifications of the testimonial givers are printed in addition to their addresses. We cannot help feeling that some of those who gave the testimonials were unaware of the use to which they would be put and are probably ignorant of the manner in which the advertisement is circulated. It is to be hoped for the dignity of the medical profession that they will hasten to dissociate themselves from this vulgar publication. Perhaps, however, the givers of the testimonials are proud to be associated with Charles Frederick Forshaw, since we find from the biographical notice which we have received that he is D.C.L., LL.D., D.D.S., of what university or universities we are not told. It would be of interest to have this information as well as to know his qualifications for being a member of the Dublin Society, a Fellow of the Irish Antiquarian Society, a Fellow of the Royal Historical Society, and so on. From his biographical notice we find that amongst other things he is the author of numerous booklets, poems, ballads, and so forth, and that one of his pastimes is "rambling in pursuit of antiquities." Perhaps his forceps is the result of such a ramble. We refer to this eloquent notice of Mr. Forshaw because we feel sure the scientific dental world must be curious to know more of a man concerning whom "Who's Who" has so much that is inspiring to say. By the bye, if we remember rightly the details for "Who's Who" are generally obtained from a little form sent to a person to fill in himself.

A PERSONAL EXPERIENCE OF POISONING BY FUMES FROM A CHARCOAL FIRE.

A PERSONAL experience of illness by a medical man is always of interest and often of peculiar value. In an ordinary case we have to rely upon the accuracy of the patient in his description of his symptoms. But when the patient is a medical man there is the great advantage that the symptoms can be described by a trained observer. The instances in medical literature in which members of the profession have described their own cases are not numerous. In the *Edinburgh Medical Journal* for September Dr. R. A. Fleming has described a personal experience of poisoning by charcoal fumes. He was stopping at a hotel in the smoking lounge of which there was a charcoal portable stove not connected with the outer air by any pipe. He remained up correcting proofs for two and a half hours after the other guests had retired. On going upstairs he felt palpitation which he attributed to over-smoking. On awaking in the morning he had severe headache which rapidly passed off. On the following night he spent two hours in the lounge after the other guests had retired and worked as before. The windows were all closed. At first he noticed a disagreeable feeling of choking suggestive of incipient pharyngitis and cold in the head. Although this did not pass away it was followed by a sense of exhilaration. The work done was up to the usual standard. When he rose palpitation began. This increased as he climbed two flights of stairs on his way to bed. When he reached his room the palpitation was most disagreeable and was accompanied by tinnitus. The heart was beating at great speed but gradually seemed to beat more and more feebly until two or three minutes after beginning to undress when he lost consciousness and fell on his back. When he recovered his wife was bending over him and he had turned round and was endeavouring to get up. He felt a burning sensation in the face but had no feeling of sickness or of the clammy sensation which is so commonly associated with ordinary fainting. His wife's account was that he lay on his back with staring eyes, flushed cheeks, and rapid and noisy breathing for one or two minutes before regaining consciousness. With the help of some brandy he with difficulty got into bed. In bed he had repeated attacks of palpitation and very rapid heart's action, the speed and force soon diminishing. Towards the end of each attack there was an overwhelming feeling of impending death. In all there were about a dozen attacks. The other symptoms were severe frontal headache and after two or three

of the attacks a feeling of nausea. He had also a feeling of "air hunger" which was not very urgent. A neighbouring practitioner was summoned. Dr. Fleming's purplish cheeks must have suggested intoxication to him, for he at once asked how much alcohol he had taken that day. The effects of the poisoning did not pass off for from 36 to 48 hours. The fumes from a badly-ventilated charcoal stove contain carbonic acid, carbonic oxide, and aqueous vapour. The percentage of carbonic acid and carbonic oxide depends on whether the charcoal burns brightly or smoulders. In this case the insidious nature of the poisoning is noteworthy. It is remarkable that a skilled medical observer was being poisoned by fumes from a charcoal stove and had no suspicion of the nature of his illness.

PRESCRIBING BY OPTICIANS.

IN another column we publish a letter from a correspondent who gives examples of serious defects of the eyes overlooked by prescribing opticians. Five such cases have occurred in his own practice within the last few months and it is well known that his experience coincides with that of other ophthalmic surgeons. It is of the utmost importance that the public should be brought to realise the grave dangers, not only to the eyes, but even to the lives, of the persons who seek advice from these self-termed "optologists." The cutting from the *Optician and Photographic Trades Review* which our correspondent incloses reveals a state of affairs which can only be described as outrageous. In the column devoted to "Queries and Our Answers" "Assistant" asks how it is possible to recognise irregular astigmatism and whether it is possible to correct this defect by optical means. In the answer irregular astigmatism is defined as the defect of refraction produced by irregularities of the cornea such as are left by keratitis or the irregularities of the lens that are the first evidence of commencing cataract. The method of its detection by the use of Placido's disc is then described. The article proceeds as follows:—

> A few years ago glass shells, which are known as contact glasses, have been introduced by Fick, for the temporary relief of irregular corneal astigmatism; they are worn in contact with the eye, and may enable some patients to work for hours at employment which they could not otherwise carry on. A contact glass is a very thin spherical shell, carefully ground, and having at its periphery a flat or rather less curved rim, by which it may be applied on the sclerotic. The curvature of the shell is that of the normal cornea—i.e., about eight mm. After instillation of cocain the glass is placed over the cornea and the space between cornea and glass is filled with an artificial serum (solution of chloride and sulphate of sodium), the refractive index of which is exactly equal to that of the cornea and aqueous fluid. In these conditions, the irregular cornea ceases to exist as a refractive surface, and is replaced by the artificial glass cornea, and as the latter is exactly spherical, the irregu ar astigmatism is theoretically corrected. This is a very ingenious way of correcting irregular corneal astigmatism. Unfortunately, contact glasses are rather expensive, as they must be ground especially for each case, and, moreover, they can only be worn for a short time, two or three hours at the utmost. It is necessary to instil cocain before placing the glass, and the artificial serum introduced between the shell and the irregular cornea rapidly loses its transparency. However, patients who would otherwise be unable to do anything or even to go about without danger are so enabled to possess, even if it be for a short time, a comparatively good acuity.

Such is the advice given in a trade journal to an assistant who, if he possesses the certificate of the Spectacle Makers' Company is, we believe, thereby debarred from using drugs for the estimation or correction of refraction. It shows clearly how this regulation is regarded by opticians themselves. Even worse than this ostentatious breach of faith is the gross disregard for the well-being of the patient. Contact glasses have been thoroughly tested by the experiments of Dor, Müller, and other competent observers and have been found wanting. They set up severe pain and irritation in a very short time, so that they have soon to be abandoned. As a therapeutic measure of practical utility they are completely discredited. The *Optician and Photographic Trades Review* cannot plead ignorance of these facts, for in the "Special Notice to Enquirers" which immediately follows it is stated that "all queries on sight testing and refraction work generally are dealt with by a qualified ophthalmic surgeon, whose methods are specially up to date and thoroughly in touch with the work of modern sight-testing opticians, and who is a member of the staff of the *Optician and Photographic Trades Review*." It ought not to be impossible to identify this "qualified ophthalmic surgeon."

UNCONTROLLABLE IMPULSE.

TWO unusual cases in which the above plea was set up have recently come before the courts. In one a boy sounded a fire-alarm without a lawful excuse; in the other a schoolboy pulled an old wooden gate on to the railway line near Chester, because, as he said, "something tempted" him so to do. In neither case was the excuse taken as a valid defence. The plea of uncontrollable or irresistible impulse is usually heard when charges of murder are being defended, notably so in the case of infanticide just after birth. The verdict of the inquest jury, "Suicide during temporary insanity," is another common instance where this plea appears to be admitted. In less serious offences "kleptomania" affords a well-known example; this method of defence was made notorious by the celebrated case of the wife of Dr. Ramsbotham which is recorded in Serjeant Ballantine's "Experiences." "Kleptomania" is said to be associated with inebriety, in which condition the power of inhibition is in abeyance. Baron Bramwell, a particularly "common-sense" judge, used to doubt the presence of such a mental condition. He is reported as saying: "Irresistible impulse—that is, irresistible in the absence of a policeman!"

MONUMENT TO EDOARDO PORRO.

"THICK as leaves in Vallombrosa," writes an Italian contributor, "congresses have been multiplying within the last six weeks, to the bewilderment of the general public and the despair of the conscientious reporter. One of these, however, held, like many of its congeners, at Milan, must not 'pass over to the majority' without some notice of its main features—I mean the 'Congresso Ostetrico-Ginecologico Italiano.' Of little more than local interest professionally, its proceedings were accompanied—some might say relieved—by two incidents of international significance—the unveiling of a monument to Edoardo Porro and the inauguration of what many outside Italy as well as within it will regard as a more characteristic record of him than his impersonation in marble—namely, the 'Istituto Ostetrico-Ginecologico di Perfezionamento' or post-graduate school of obstetrics and gynæcology. Porro, it will be remembered,[1] died in the zenith of his fame and powers some four years and three months ago, the victim of blood poisoning contracted in an operation in his own clinique, and the sense of loss which the tragic event brought home to his compatriots found a sympathetic response in the medical schools throughout the world. In the first rank as a pioneer of laparotomy in his own department, he was specially prominent as a teacher who by his clinical demonstrations and prælections attracted pupils from every nationality. Thanks to him the Lombard capital acquired a name for obstetric and gynæcological medicine which, to her honour, she has striven to perpetuate, not only by liberal encouragement of his successors, Mangiagalli and Clivio, but by carrying out the project dear to his heart, the completion of a post-graduate obstetric clinique, of which he lived long enough to lay the foundations. At the inauguration of this institution the spokesman of the occasion, the Senator Mangiagalli, after thanking his colleagues for their celebration of his jubilee or twenty-fifth year of clinical work, dwelt feelingly and effectively on the

[1] THE LANCET, July 26th, 1902, p. 252.

great obstetrician who might in every sense be called the *genius loci* and having paid an eloquent tribute to his many gifts intellectual, moral, and professional, he reviewed the benefits to be derived from post-graduate study in a department so important and so complex as that of gynæcology, finally congratulating his audience on the thoroughness and at the same time the facility with which those benefits could be vouchsafed in the admirably equipped clinique just opened. That, he truly said, was the real and enduring monument to the life, the work, and the fascinating personality of Porro, whose 'animated bust'—a *chef d'œuvre* of the sculptor's art—was thereafter unveiled. And so ended the proceedings of the Twelfth Congress of Italian Obstetricians and Gynæcologists, not without coincident congratulations on that other adjunct to the Milanese school, the noble Policlinico, on which again, as to its inception and partially at least as to its completion, the name of Edoardo Porro is 'writ large.'"

THE WHEEL OF LIFE.

MOST of us at one time or another have experienced that curious sensation of "having been there before," a sensation which our neighbours across the channel express more concisely by the phrase "*Déjà vu*," and which was discussed at length by Dr. Pierre Janet in the *Journal de Psychologie Normale et Pathologique* of July-August, 1905. Mr. Kipling in his most recent book[1] is apparently so saturated with this belief that we ourselves as we read seem to be living in Roman Britain, Norman and Angevin England, the times of Sebastian Cabot and Henry VIII. Happy are the children, both young and old, among us who have the opportunity of reading history under such a guise as that in which Mr. Kipling presents it to them. What we envy so about Mr. Kipling is his wonderful faculty of putting down his imaginations on paper and conveying them to the reader. Many of us can see with the innermost eye, but how few of us can translate our visions into plain print, or colour, or sound? A writer, a painter, and a musician have this much-to-be-envied faculty, and some of Mr. Kipling's visions are worthy to rank with those of Turner or those of Bach. All the stories in the book are good, but we think on the whole that we most like the ones dealing with Parnesius the Centurion and the wonderful account of the flitting of the "Pharisees" after "Queen Bess's father he come in with his Reformatories." Interspersed among the stories are songs which sing themselves. Take, for instance, the "Three-part song," the Children's Song, which closes the book, the magnificent song to Mithras, and the one which is nameless but commences—

> Cities and Thrones and Powers,
> Stand in Time's eye,
> Almost as long as flowers,
> Which daily die;
> But, as new buds put forth,
> To glad new men,
> Out of the spent and unconsidered Earth,
> The Cities rise again.

Somehow this reminds us of those wonderful stanzas of Prudentius, in the hymn which is one of the few grains of wheat among his masses of chaff, describing the great procession of the cities at the last day bringing their saints and martyrs—

> Cum Deus dextram quatiens coruscam
> Nube subnixus veniet rubente
> Gentibus justam positurus æquo
> Pondere libram.
>
> Orbe de magno caput excitata
> Obviam Xto properanter ibit
> Civitas quæque pretiosa portans
> Dona canistris.

In this workaday world it is well at times to be able to leave the stress of modern life and to be translated into days in which, although trouble and sorrow were not absent, yet life was more simple and men, being more childlike than are we moderns, were in a way nearer to the things which were and shall be than to those that are.

[1] Puck of Pook's Hill. By Rudyard Kipling. London: Macmillan and Co., Limited. 1906. Price 6s. Pp. 306.

THE BRACHIAL PLEXUS.

THANKS chiefly to the communications of Robert Kennedy, Wilfred Harris, and Warren Low, attention has been lately redirected to the possibility of successful surgical intervention in traumatic lesions of the brachial plexus. The two last-mentioned observers have also shown that certain cases of infantile paralysis of the arm are amenable to similar treatment. In these circumstances an accurate knowledge of the anatomy of the plexus becomes more than ever necessary. That the arrangement varies somewhat in different individuals is well known and it also seems that the common types of variation are two, one of which at present appears to be comparatively unimportant from a surgical standpoint, whilst the other has a decided practical significance. The first form of variation is in the point at which the anterior primary divisions of the nerve trunks which form the plexus divide into anterior and posterior branches. A comparison of various anatomical text-books will show that although in most the division is described as occurring after the formation of the upper, middle, and lower trunks of the plexus, yet in several the illustrative diagram depicts a different condition of affairs, in that the splitting into anterior and posterior divisions occurs before the three trunks are formed. No doubt the extent to which the dissection is pushed is in the main responsible for the discrepancy, for the subdivision of the trunks by careful dissection is comparatively easy of accomplishment. But a variation which at present appears to be of more practical importance is the displacement of the plexus along the spinal axis a short distance above or below what may be taken as its mean position. Using the terminology of Professor C. S. Sherrington, these dislocations give rise to plexuses of the "pre fixed" or "post-fixed" types. If the displacement consisted in the shifting of the plexus upwards or downwards to the extent of one complete spinal nerve the matter would be comparatively simple, but the ordinary displacement is less than this, leading to a variation in the number of fibres contributed by a nerve to the various terminal trunks into the formation of which it enters. This becomes of great importance when the plexus is the field of surgical proceedings. The researches of Herringham, which formed the basis of a paper communicated to the Royal Society 20 years ago, are familiar to most anatomists. Mr. Sydney R. Scott has adopted the same method of investigation and has published his results in the *Journal of Anatomy and Physiology*, Vol. XL. The investigation does not cover such a wide field as did that of Herringham, being limited to a dissection of the decussating fibres in the plexus itself and not carried on to the actual muscular destination of the various filaments involved. The research of Mr. Scott deals with the interchange of fibres between the fifth and sixth cervical nerves at their point of union and the arrangement of the fibres of the outer, posterior, and inner cords of the plexus. For convenience these decussations were designated alphabetically A, B, C, and D. The results may be briefly summarised as follows. The dissection of decussation A confirmed Herringham's assertion that in certain cases the sixth cervical nerve forms a very inconsiderable part of the suprascapular trunk and sometimes fails to enter it at all. The dissection of the outer cord (decussation B) showed that in the formation of the musculo-cutaneous nerve and the outer head of the median there was practically no interchange of fibres between the fifth, sixth, and seventh nerves. The fifth and sixth fibres entered the musculo-cutaneous whilst the seventh went to the median. These

results differ somewhat from those of Herringham who concluded that the outer head of the median nerve always contained filaments from the fifth and sixth roots. Mr. Scott makes no mention of the nerve to the coraco-brachialis, which Herringham described as distinct from the musculo-cutaneous trunk proper and originating from the seventh root. The dissection of the posterior cord (decussation C) revealed the circumflex trunk as derived from the fifth and sixth nerves, whilst the fifth, sixth, seventh, and eighth all entered into the formation of the musculo-spiral. The inner cord (decussation D) proved to be constituted as follows: the inner head of the median from the eighth and ninth roots, the ulnar from the eighth cervical, first dorsal, and sometimes also the seventh cervical; and the internal cutaneous from the eighth cervical and first dorsal roots. Herringham's dissections led him to conclude that the internal cutaneous nerve was more frequently derived from the first dorsal alone. The method of presenting his results adopted by Mr. Scott does not give definite information as to the level of origin of the nerves throughout each individual p'exus which he examined. Consequently the paper throws no direct light on the frequency of the pre- or post-fixed conditions. Neither is it possible to gather whether, when the upper filaments had a high origin, a similar displacement obtained in the lower parts of the plexus. It is usually assumed that the displacement is uniform throughout the contributing roots, but it is well to bear in mind that in one of Herringham's observations the representation of the muscles appeared to begin at the ordinary level but was more than usually lengthened out so that the second dorsal nerve contributed largely to the plexus. The controversy amongst surgeons as to whether Erb's group of muscles is supplied by the fifth cervical root exclusively or by the fifth and sixth roots conjointly may very well be due to anatomical variations. The practical rule to be deduced is that when the plexus is exposed for operation the destination of the nerves should be tested by electrical stimulation before the repair is attempted

MUNICIPAL MUDDLES.

WE have recently been the spectators of what we as ordinary citizens consider a remarkable piece of municipal muddling. Not far from this office some houses are being pulled down. Soon after 8 o'clock a four-wheeled cart, drawn by a fine cart-horse, and sundry men arrived at the houses in question. Soon after 10 o'clock, owing to the traffic in the Strand increasing, the cart, the horse, and the men were directed by the police to stand in Bedford-street. Nothing further occurred until half-past three and we thought it would be interesting to make inquiries. We learned that owing to the owner of the property or the contractor who was pulling down the houses not having complied with certain requirements of the Westminster district surveyor, that official applied to the Works Department of the County Council to supply materials for shoring up certain portions of either the condemned structure or of the adjacent houses. Hence the arrival of the cart. Coincidently apparently with the arrival of the cart the owner of the condemned property or the contractor decided to comply with the requirements which had hitherto been ignored. We were then informed that the cart, the horse, and the men had received orders to wait for instructions. By 4 o'clock the instructions had apparently not arrived, for the cart, the horse, and the men were all there. Now, surely this is an example of pure and simple muddle. Why should three or four men, to say nothing of a valuable horse, be condemned to stand in a damp and windy street for eight hours doing absolutely nothing and with every chance of contracting pneumonia in the case of the men or colic in the case of the horse? If the County Council's shoring apparatus was needed to shore up the house why was it not put into action? If it was not necessary why was it not sent home? Surely somebody might have made up his mind between 8 o'clock and 12, say, whether the retention of the cart, the men, and the horse was or was not necessary. We presume that the expense of the affair will fall upon the owner of the condemned property, but even if it does not the state of things which could allow such a feckless proceeding should, we think, be altered. We may add that the cart, the horse, and the men departed at 4 25 P.M.

"DIABETIC BREAD."

OUR attention recently has been drawn by two correspondents, independently of each other, to a so-called diabetic bread which has lately been introduced from France into the English market. The bread is called "Brusson diabetic bread," and the sole agents for its sale in this country state that the bread is "prepared by a special process and according to the direction of several leading medical men is largely prescribed in France and Germany in the treatment of diabetes, obesity, gout, rheumatism, and in cases where food of a highly nutritious character is indicated." It is added that "in introducing it into England we feel certain it will, in a great measure, overcome the difficulty of dieting diabetic patients owing to the uninviting character of the food hitherto recommended and the early distaste it causes." It is fair to remark that nowhere in the circulars which we have received and in which the bread is described is it stated to be free from starch but it is "an alimentary product (we are quoting from one of the circulars) which, whilst retaining the high nutritive property of gluten and prepared according to medical directions, is agreeable to the taste and can therefore be taken for a lengthy period of time." Again, "this bread ..... presents over the ordinary gluten bread the advantage that it does not swell when baked, is of easy mastication and insalivation, and consequently more digestible." Statements of this kind should serve as a warning to the practitioner never to prescribe a so-called "diabetic food" unless precise statements as to its composition are given. Whether it is justifiable or not to give some patients suffering from diabetes a proportion of starch in their food must be left to the practitioner and to his judgment of individual indications. In any case, he should be acquainted with a correct analysis of the food. The "diabetic bread" referred to contained, according to our analysis in two specimens examined, not less than 50 and 48 per cent. of starch respectively.

THE TREATMENT OF SPRUE.

IN the *Journal of Tropical Medicine* of Sept. 15th Mr. James Cantlie has published an important article on the treatment of sprue. The question of a milk *versus* a meat diet is still debated. Mr. Cantlie has for years advocated a rigid meat diet. While still adhering to this as the means of curing sprue rapidly and efficiently extended experience has modified his view that by this means alone sprue is always permanently cured. He has proved again and again that a patient who appears to be in the last stage—in which there is, in addition to emaciation, anæmia, and dropsy, a decided rise of temperature—can be saved by putting him on home-made beef-tea, raw meat juice, and beef jelly, administered in teaspoonful doses every ten minutes, if necessary. Milk in such cases means death; by meat juices alone can a patient be saved. As the patient's strength improves the interval between times of feeding may be increased, after the first 24 hours, to 20 minutes on the second day and to half an hour or an hour on the third or fourth days. By the fifth day pounded beef will be tolerated and enjoyed and the interval may be increased to two hours,

pounded beef, meat juice, beef-tea, and beef jelly being taken seriatim. In a week or a fortnight, if progress is satisfactory, vegetables, bread, and stewed fruit may be added with benefit. But at this stage or later a relapse usually occurs and the treatment seems to have failed. A milk diet, except in the later stages of sprue, will produce solid stools but it does not as a rule cure. A milk and a meat diet cannot be taken together with advantage but a patient on a meat diet may abstain every third or fourth day from meat and take milk for 24 hours. This Mr. Cantlie has found to be the secret of success in the prolonged treatment of sprue. Either diet separately is attended by relapses and ordinary attempts to combine these diets are unsuccessful. The explanation of the success of the method described is difficult. But Sir Lauder Brunton has suggested the following explanation. The bacteria of the intestine can accommodate themselves to almost any kind of food. If a milk diet has been followed a sudden change to a meat diet places them at a disadvantage; their activity ceases and they largely die out. Then they recover and multiply and again become virulent. But on suddenly reverting to milk they are again hampered. In several cases of sprue the patients have returned to the tropics and on one day a week abandoned their usual diet and taken nothing but milk for 24 hours. In this way persons for whom life in a warm climate would have been otherwise impossible have been able to enjoy good health.

SEX MORTALITY FROM CANCER.

ACCORDING to the last issued report of the Registrar-General, relating to the year 1904, the rate of mortality from cancer in England and Wales in that year was equal to 741 per 1,000,000 among males of all ages and to 1006 among females. Compared with the rates recorded seven years previously, in 1897, the increase of the male death-rate from cancer was 17 per cent., while the increase of the female rate did not exceed 8 per cent. Similarly the relative increase of recorded cancer mortality between 1861–70 and 1891–97 was, according to the Registrar-General's sixtieth report, very nearly twice as great among males as as among females. The importance of the question as to the proportion of the constantly increasing number of deaths referred to malignant disease due to improved diagnosis and the greater accuracy in the certification of causes of death cannot be doubted. Some of the statistics contained in the Registrar-General's report moreover raise questions of interest connected with the causation of cancer. Since 1889 these reports have from time to time contained useful statistics bearing upon the parts of the human body affected by fatal cancer. The last issued report contains a table in which the 114,130 deaths referred to malignant disease in England and Wales during the four years 1901–04 are classified according to the part affected, as described by the certifying medical practitioner. It is satisfactory to note that this information was available for those four years in all but 1 per cent. of the fatal cases, whereas in 1897 this information was not ascertained in 5 per cent. of the cases. These recent statistics to a great extent corroborate the conclusions drawn from somewhat similar statistics published in the report for 1889 when it was pointed out that "the increase (in the 20 years 1863–88) has been comparatively slight in those organs which are the commonest seats of malignant growths—namely, the generative and mammary organs of women—and has been largest, and this for both sexes, in the organs of the digestive and the urinary systems, and notably in the intestines, rectum, liver, and urinary bladder." It was then also pointed out that the fatal cases of the disease affecting the mouth, the lips, the tongue, the pharynx, and the fauces showed a very marked increase among men, whereas among women the fatal disease affecting those parts showed a decline. The recently published figures show that in the four years 1901–04 the number of fatal cases of cancer affecting those parts were no fewer than 7246 among males and only 1667 among females. This marked excess of mortality among males in this class of case calls for careful investigation and suggests the inquiry whether it may be the result of nicotine poisoning, as for all other cancer mortality in which the figures are fairly comparable the female rates of mortality considerably exceed the male rates. The fact that the increase of recorded cancer mortality in both sexes continues to be most marked in those cases which present most difficulty in diagnosis throws doubt on the alleged large increase in the actual prevalence of the disease, but throws little light upon the far greater rate of increase among males, which deserves the careful attention of the Director of the Imperial Cancer Research Fund, who appears to have afforded assistance to the Registrar-General in the classification of the parts of the body affected by cancer in the recently published table referred to above. With regard to the increase in the recorded mortality of persons (of both sexes) from cancer it is satisfactory to note that while it was equal to 15·3 per cent. between 1881–85 and 1886–90, the increase has steadily declined in each successive quinquennium and did not exceed 8·0 per cent. between 1896–1900 and 1901–05.

THE OPIUM TRAFFIC.

THE Chinese Imperial edict abolishing the use of opium after ten years recalls the action recently taken by the Transvaal Legislative Council and the Australian Government, an account of which is given in the *Pharmaceutical Journal* of Sept. 29th. The advent of Chinese labourers on the Rand was immediately followed by an enormous increase in the imports of opium. The mine owners found that opium smoking rendered the coolies less efficient workmen and chiefly as a result of their representations the ordinance of Oct. 6th, 1905, was gazetted, restricting the importation of opium and its preparations into the Transvaal to registered medical practitioners, dentists, and druggists. The ordinance also made it unlawful for unqualified persons to be in possession of any such substance except for medicinal purposes, the penalties for offences being exceptionally heavy. The immediate result of this ordinance was to transfer the opium traffic to illicit channels and smuggling was carried on to a large extent. Some of the devices adopted by the smugglers were ingenious, opium having been known to pass through the Customs disguised as "meat extract" and "food for invalids." In January last the Australian Federal Government prohibited the importation of opium for the purpose of smoking and empowered the collector of Customs to grant licences to qualified medical practitioners, pharmaceutical druggists, and persons lawfully carrying on business as wholesale druggists, in order that supplies of opium might be available for medicinal purposes. These various enactments against the opium traffic raise the interesting question as to the effect of immediate prohibition on habitués. The committee appointed by the Government of the Philippine Islands to make a report on the opium conditions in the Orient came to the conclusion that immediate prohibition is likely to cause extreme suffering among those who are already habitués of opium, as it is exceedingly difficult for anyone to discontinue the use of the drug at once. As a result of investigations the committee considered that immediate prohibition is practicable only as a preventive measure in communities where the practice of opium smoking has never obtained. In those communities where opium is used and prohibition has been tried it has proved to be a source

of blackmail. The committee stated that the time necessary to enable a person accustomed to the use of the drug to discontinue the habit had been variously estimated at from six months to 20 years.

EXTENSIONS OF THE PROVISIONS IN REGARD TO THE CONTROL OF FACTORIES AND WORKSHOPS AND THE ALKALI TRADES.

THE Secretary of State for the Home Department has issued an Order in which in pursuance of Section 66 of the Factory and Workshop Act of 1901 he extends to the classes of workshops named in the schedule to the Order the prohibition of the employment of young persons under the age of 16 years and children without a certificate of fitness of the young person or child for employment. The Order will come into force on Jan. 1st, 1907, and the schedule includes those workshops in which the following processes are carried on: file-cutting; carriage-building; rope and twine making; brick and tile making; making of iron and steel cables, chains, anchors, grapnels, and cart gear; making of nails, screws, and rivets; baking bread, biscuits, or confectionery; fruit preserving and making; and altering, ornamenting, finishing, or repairing of wearing apparel by the aid of treadle sewing machines. As regards the Alkali, &c., Works Regulation Act, 1906, which repeals the Acts of 1881 and 1892, certain chemical works not hitherto liable to registration are required to be registered and are subject to inspection by the local Government inspectors. A circular has therefore been issued to the municipal authorities or district councils in which they are asked to furnish information as to the works in their administrative area which by the recent Act have been brought under the Order for registration. Information is desired accordingly in regard to smelting works, chemical manure works, gas liquor works, nitric acid works, chlorine works, muriatic acid works, sulphide works (barium, strontium, and antimony), alkali waste works, lead deposit works, sulpho-cyanide works, picric acid works, paraffin oil works, bisulphite works, tar works, and zinc works. It is requested that the return asked for may be sent to the Local Government Board not later than Oct. 15th next.

THE THERAPEUTIC VALUE OF OLIVE LEAVES.

THE leaves of the European olive, *olea Europæa*, according to a communication from Sir James Sawyer which is published in the *Pharmaceutical Journal* of Oct. 6th, have a definite medicinal value. They are prescribed in the form of a tincture prepared by exhausting four ounces of the leaves with 60 per cent. alcohol to produce one pint. This tincture of olive leaves may be given as a tonic in doses of from 15 to 30 minims and as a febrifuge and antiperiodic in larger doses. The fresh leaves yield an extract which may be given as a tonic in five-grain doses or more in pills or triturated with an aromatic water in a mixture. The tincture is incompatible with ferric salts, forming an inky-coloured mixture; it also precipitates strychnine from solutions. Olive leaves are by no means new to medicine. Their medicinal properties were described in Pereira's "Elements of Materia Medica and Therapeutics," and in 1854, during the Crimean War, Daniel Hanbury declared that "in the treatment of the numerous cases of fever in the military hospitals in the East it would be desirable that practitioners should give a fair trial to so easily accessible a substitute for the costly quinine." During the Peninsular War, 1808–13, olive leaves were frequently prescribed by French practitioners as a substitute for cinchona bark, and Hanbury quoted the analysis of Dr. Pallas, published in 1828, from which it appears that the leaves and young bark of the olive tree contain a crystallisable substance and also a bitter principle to which the febrifugal properties of the plant were ascribed. Though the young bark of the olive tree is richer in these constituents than either the leaves or the old bark Sir James Sawyer prefers to employ the leaves which are more constant in composition. It is interesting to note that in 1843 a Mr. Maltass, writing from Smyrna to Hanbury, described how he found out the medicinal use of the olive tree. He was in the island of Mitylene during a severe epidemic of fever and ague, attacks of which generally proved fatal after a week or ten days. The supplies of quinine were soon exhausted and Mr. Maltass turned over in his mind the various native plants which might yield bitter principles, as he knew that salicin and biberine were useful in cases of fever and ague. Eventually he thought of olive leaves and after several trials on himself he commenced to administer them in the form of a decoction, prepared by boiling two handfuls in a quart of water and evaporating to a pint. Obstinate cases of fever yielded to wineglassful doses, given every three or four hours. Sir James Sawyer's communication serves to show the importance of retaining old and proved remedies and of combating the modern tendency to grasp the newest synthetic remedy and to employ it until another takes its place, neglecting and ultimately forgetting the uses of the old herbs.

Dr. E. G. Graham Little has been elected by the registered graduates in medicine and in surgery, members of Convocation of the University of London, to the vacant appointment in the Faculty of Medicine in the Senate of the University of London which was due to the resignation of Dr. J. F. Payne. Dr. Graham Little obtained 444 votes and Dr. Frederick Taylor, the other candidate, received 431.

THE inaugural meeting of the session of the Guy's Hospital Pupils' Physical Society will take place in the physiological theatre to-day (Saturday, Oct. 13th), when Dr. T. Clifford Allbutt, Regius Professor of Physic in the University of Cambridge, will deliver an address on "Words and Things." The chair will be taken at 8 P.M. by Sir Samuel Wilks, Bart., M.D. Lond., F.R.S.

THE annual dinner of the past and present students of the National Dental Hospital and College will be held at the Trocadéro Restaurant, Piccadilly-circus, London, on Friday, Nov. 23rd. The chair will be taken by Mr. Henry Morris, President of the Royal College of Surgeons of England.

Professor M. McHardy will deliver the opening lecture of the new session at the Royal Eye Hospital, Southwark, on Monday evening next, Oct. 15th, at 8 0 P.M. All students and practitioners are invited to attend.

THE new buildings of University College Hospital, erected through the generosity of the late Sir John Blundell Maple, Bart., will be opened by H.R.H. the Duke of Connaught on Tuesday, Nov. 6th, at 3 P.M.

A TELEGRAM from the Governor of the Mauritius received at the Colonial Office on Oct. 5th states that for the week ended Oct. 4th there were 22 cases of plague and 15 deaths from the disease.

BRISTOL MEDICAL SCHOOL.—Dr. Alexander MacAlister was the guest of the evening at the annual dinner of the Bristol Medical School held on Oct. 2nd at the Royal Hotel, Clifton, under the presidency of Dr. Frank J. Wethered.

THE WORKMEN'S COMPENSATION BILL.

(AS AMENDED BY THE STANDING COMMITTEE ON LAW, &c.)

BY ALBERT BENTHALL, F.R.C.P. EDIN.

AFTER various interviews with leading railway, insurance, and other officials representing large employers of labour, I have drafted the following questions which are being put before the Highways Committee of the London County Council, the Railway Committee, and the Committee of the Accident Insurance Offices Association. I shall be obliged if you will allow me to place them before the profession through your columns with the notes explanatory of the position, which I have appended:—

MEDICAL QUESTIONS FOR CONSIDERATION

Re Notice of Accident, Clause 2, (2), page 3, lines 2–3.

Question 1.—Should not the workman state "the cause of the accident and nature and extent of the injury?"

Question 2.—If so, whether "in ordinary language" or on a form?

Re Examinations of Medical Referees, (15), page 20, lines 8, 9, 10.

Question 3.—Should the employer have notice of the time and place fixed for the examination?

Question 4.—Should the medical referee, when declining to give a certificate, state his reasons for so declining? (The certificate of the medical referee is to be conclusive.)

Re Examinations by Medical Practitioners provided and paid by Employers, 1st Schedule, page 19, (15). (In future these examinations will only be made under the regulations of the Secretary of State and at the intervals prescribed therein.)

Question 5.—Should notice of the intended examination be sent to the workman, so that his doctor may be present if the workman desires it?

Question 6.—Or are in some cases surprise visits necessary?

Question 7.—Should a workman be required to submit himself for examination away from his home?

Question 8.—What should be the regulations as to the intervals between examinations?

Question 9.—Do the present medical referees in all cases command the confidence of the public?

Question 10.—If not, what should be the requirements of the Secretary of State when appointing medical referees with the largely increased powers of the new Act?

NOTES.

Question 1.—I originally suggested, before the Departmental Committee of the Home Office was appointed, that a workman in his notice of accident should append a short medical certificate, and I still am of opinion that this would be in the interest of every *bonâ fide* injured workman and that it would save employers from many bogus claims. I was informed, however, that it was impossible, as the labour societies were strongly opposed to it on the ground that many injured workmen could not afford the expense, that the Government certainly would not pay the fees, and that the employers could not be asked to pay for certificates which it was the interest of the workman to place before them. In view of all this, I have put the question in the above form and there is a general consensus of opinion that the "cause of the accident and nature and extent of the injury" should be stated.

Question 2.—I think it is evident that if the above is required it should not be in the ordinary language of the workman but on a short form requiring only short answers, which could be obtained free at any post-office.

Question 3.—The medical referee is to act as a judge whose decision is final and not subject to appeal. It is evident that the workman must be informed of the time and place of examination and that he can have his medical attendant present at the examination. It is considered by employers that it would be unfair if they had not the right of being represented at the examination by a medical man in cases in which they thought it necessary.

Question 4.—It is considered that it would be no hardship on the medical referee, since he will have received his fee for the examination and certificate, if when he declines to give a certificate, that he should be obliged to give a detailed statement of his reasons for so declining, and that this would be in the interest of both employer and workman.

Questions 5 and 6.—This raises a very important question; it is evident that no medical practitioner provided and paid by the employer can interfere with another medical man's patient or remove dressings and at first sight it would seem that the workman should be in every case notified of the time and place of the intended examination, so that he could have his medical attendant present, but we have to consider the experience of the last seven years and certain hard facts which it must be admitted occur, and which must be provided against. It has been found that when the workman knows the time of the examination he very seldom has his medical attendant present, as he does not wish to pay any fee; it is only when the employer disputes the fact alleged as to the injury and the case is in the hands of a solicitor that a medical man attends on the part of the workman and then in nine cases out of ten not the medical attendant but a stranger, imported by the solicitor into the case, of which he knows nothing. Again, it is stated that in certain cases of malingering, if notice of an intended visit is given, the patient will be found groaning in bed instead of about the house and dressed or away from his house altogether. There is therefore a strong consensus of opinion on this point that surprise visits should be allowed and I do not think that this will be against the interest of the profession, as employers will not send a "medical practitioner" to make a surprise visit, except in suspicious cases, as he could not report if the man was out or if his injury was in antiseptic or other dressings which could not be removed without the medical attendant.

Question 7.—This would be necessary in many cases and would not be a hardship if the distance were not unreasonable and the employer paid the fare, but the workman should not be under the obligation if he wished his medical attendant to be present, as the expense of bringing the medical man away from his visiting district would be prohibitory.

Question 8.—This is almost an insolvable problem; the clause has evidently been introduced to prevent a certain practice which is highly objectionable—that of continually requiring the workman to submit himself for examination with a view of worrying him into a settlement of his claim. I think, however, that this practice will automatically cease when settlements have to be registered in the county court and will be upset if unfair. If, however, the Secretary of State must make regulations it is clear that one interval will not suit all the differing cases and hardship might arise. I think a limit might be fixed, to be altered, however, in any case with the consent of the medical attendant of the workman.

Question 9.—I am sorry to say that in some instances medical referees do not command the confidence of the profession in their districts or of many employers that I have met.

Question 10.—It has been impressed on me by both employers and workmen that a new list of medical referees should be appointed, each newly appointed man being a surgeon of experience, used to the examination of accidental injuries and all forms of malingering; he should not be employed by any firm of employers, or society of workmen, or by an insurance office doing workmen's compensation business, and, if possible, he should be a surgeon to the local hospital. It is certain that if the medical referee whose decisions are to be final and conclusive does not command the entire confidence of the profession in his district an intolerable state of things would arise and the Act become unworkable.

THE QUATERCENTENARY OF THE UNIVERSITY OF ABERDEEN.

A BRILLIANT series of functions took place from Sept. 25th to 28th inclusive, both town and gown uniting in making celebration week one never to be forgotten in the history of the University. Among the most notable features were the absolutely perfect weather, the catholicity of the response to the University's invitation—from Canada and the Cape, from Australia and India, from North and South America, from Syria and Japan, and from every country in Europe—and the excellence of the organisation, the details of all the ceremonies being attended to with Japanese forethought and thoroughness. The only suggested improvement was that of Professor Ostwald that the text of a speaker's address should be projected by means of an optical lantern on a large screen above the speaker, line by line appearing as he proceeded, so that every one of the many thousands present could have followed the words.

The celebrations opened on the morning of the 25th with a commemoration service in King's College Chapel. The attendance had to be limited but was strictly representative and cosmopolitan. The rich colours of the gowns and

uniforms worn blended in picturesque harmony with the beautiful chapel, the whole forming a picture of the greatest brilliance and splendour. In the afternoon a procession of the members of the University, guests and delegates, and the town officials took place from Marischal College to the Strathcona Hall, between 3000 and 4000 persons taking part. It was a magnificent and brilliant spectacle, nothing like it having ever been seen in Aberdeen, and in point of gorgeousness of colour and of picturesqueness it was superb, while the number of distinguished men from many lands was remarkable. In the hall a most imposing ceremony took place in the reception of the delegates. The delegates of each country rose when called on and approached the dais, while the band played the national air of their country. One delegate spoke for each country and many congratulatory addresses from the various universities and institutions were presented to the Chancellor. There was a constant succession of delegates for about two hours. St. Bartholomew's Hospital, London, was represented by Sir Dyce Duckworth and the text of his address was as follows :—

UNIVERSITATI ABERDONENSI
SCHOLA MEDICINAE SANCTI BARTHOLOMAEI APOSTOLI APUD LONDINENSES
S. P. D.

Quarto jam saeculo diem referente natalem Universitatis vestrae, gratulatur vobis animo libentissimo schola Hospitii Sancti Bartholomaei, et bona omnia et fausta precatur.

Misimus feriarum vestrarum non modo testem sed etiam participem collegam nostrum Dyce Duckworth, Equitem Auratum, emeritum hospitii nostri medicum.

Non enim sumus immemores inter alumnos Aberdonenses qui doctrina ac virtute Universitatis suae annales exornaverunt, complures in re medica illustres scholae nostrae ampliorem famam contulisse.

Nihil ergo, viri doctissimi, hodie auspicatius arbitramur quam doctrinae sedi tam insigni in posterum per saecula plurima fortunam in dies feliciorem exoptare. Valete!

The following is the text of an address presented by Mr. Henry R. Swanzy, President of the Royal College of Surgeons in Ireland, in the name of the College :—

PRAECLARAE UNIVERSITATI ABERDONENSI
REGIUM COLLEGIUM CHIRURGORUM APUD HIBERNOS
S. P. D.

Vehementer vobis, viri illustres, gratulamur quod quattuor saeculis prospere decursis quintum iam auspiciis faustissimis inchoatis.

Universitas Aberdonensis cum primum orta est anno post Christum natum MCCCCXCV. in ipsis incunabulis Facultatem Medicinae longe in his finibus antiquissimam instituit—cuius rei gratia sit conditori vestro sagacissimo Gulielmo Elphinstone.

Unde est orsa in eo perstitit atque nunc perseverat. Per annos iam quadringentos haec regna, imperium Britannicum, cuncti denique homines Universitati vestrae Scientiam Disciplinamque Medicam auctas fotas ornatas gratis animis assignarunt et assignant.

Anatomiam Activam, quae dicitur,—studium arti quam praecipue nos colimus coniunctissimum—usque ab anno MDCXXXII. successu optimo exercuistis.

Iuvat referre nomina Professorum et Alumnorum Aberdonensium qui in summam claritudinem rei Medicae et peritia et exercitatione pervenerunt. Ne taceamus Andraeum Moir, Gulielmum Pirie, Matthaeum Duncan, Andraeum Clark, quattuor denique Gregorios qui de Schola Medica intra muros Academicos condenda tam bene meriti sunt. Plures immo plurimos alios viros insignes memorare liberet, sed finibis certis continemur ultra quos veremur ne iam iam egressi simus.

Restat ut Universitati Aberdonensi totis animis de hac tam felici occasione etiam atque etiam gratulemur et vota dignissima nuncupemus pro perpetua eius incolumitate faustoque novi saeculi initio.

Nomina Subnotabamus.

HENRICUS R. SWANZY, Praeses.
JOHANNES LENTAIGNE, Praesidis Vicarius.
Id. Sext. MCMVI. CAROLUS CAMERON, Secretarius.

In the evening a banquet was given in the music hall by the town council, the students meantime having a torchlight procession.

The opening ceremonial on Sept. 26th was the conferment of honorary degrees in the Mitchell Hall. Seldom, if ever, has any university had the privilege of bestowing the highest honour in its gift upon such a large and representative company of eminent men, among whom were the following distinguished medical men: Sir James Crichton-Browne, Lord Chancellor's visitor in lunacy; W. Einthoven, professor of physiology, Leyden; Herbert Mackay Ellis, Director-General of the Royal Navy Medical Service; Carl Flügge, professor of hygiene, Breslau; H. J. Hamburger, professor of physiology, Groningen; Ferdinand Hueppe, professor of hygiene, Prague; Howard A. Kelly, professor of gynæcology, Johns Hopkins University, Baltimore; Sir Alfred Keogh, Director-General of the Army Medical Service; Rudolf E. Kobert, professor of pharmacology, Rostock; Casimir Kostanecki, professor of anatomy, Cracow; Hugo Kronecker, professor of physiology, Bern; Sir Francis H. Laking, physician-in-ordinary to His Majesty the King; Oscar Liebreich, professor of pharmacology, Berlin; Friedrich Loeffler, professor of hygiene, Greifswald; Cesare Lombroso, professor of psychiatry, Turin; Donald MacAlister, President of the General Medical Council; A. B. Macallum, professor of physiology, Toronto; Sir John Macfadyean, principal of the Royal Veterinary College; Jinzo Matsumura, professor of botany, Tokyo; Edmund Owen, Vice-President of the Royal College of Surgeons of England; Rev. George E. Post, professor of surgery in Johanite Hospital, Beirut; Sir Richard Douglas Powell, President of the Royal College of Physicians of London; Guglielmo Romiti, professor of anatomy, Pisa; Ronald Ross, professor of tropical medicine, University of Liverpool; Frederick Trendelenburg, professor of surgery, University of Leipsic; Sir William Turner, Principal of the University of Edinburgh; J. William White, professor of surgery, University of Pennsylvania; J. W. van Wijhe, professor of anatomy, University of Groningen; and Sir John Williams, late professor of midwifery, University College, London.

In the afternoon an interesting feature was the athletic sports at King's College, while in the evening a reception in the Art Gallery and a students' ball attracted the attention of the visitors. The Medico-Chirurgical Society held dinners on the 26th and the 28th, at which Professor A. Ogston and Dr. Angus Fraser respectively presided over very pleasant companies of eminent medical men.

Thursday, the 27th, proved the most memorable day, when His Majesty the King, accompanied by the Queen, came to declare the new buildings open. The quadrangle was converted into a spacious assembly hall for the occasion, and the seating of over 4000 spectators was carried out without a hitch. The scene during the arrival of the great assemblage was exceedingly picturesque. Their Majesties had a most cordial reception. Miss Ramsay presented the Queen with a bouquet and Principal Lang read the address from the University. The King, in reply, said: "On behalf of myself and the Queen, I thank you heartily for your cordial welcome and your dutiful address. It gives us great pleasure to be present at this commemoration of the founding of the two institutions incorporated with the University of Aberdeen, which, during four centuries, has played so distinguished a part in the advancement of learning. Your allusions to the close association of many of my predecessors on the Throne, especially of my august and beloved mother, with the University are of deep interest, and I shall always feel a lively concern for its welfare. I am glad to know that with this commemoration is combined a notable addition to the equipment of the University. It gives me much pleasure to open these new buildings for the promotion of scientific and higher education, for I am well assured that the further pursuit of those studies will advance the prosperity of this part of my realm and add to the great name and traditions of the University."

The Royal visitors graciously inspected part of the new buildings. The Royal Army Medical Corps (Volunteers), under the command of Major J. Scott Riddell, M.V.O., were proud of the distinction accorded them of forming a guard of honour at the entrance to the quadrangle.

Their Majesties, after leaving the University, were entertained by the corporation at the Town House, while during the evening the great Strathcona banquet was held, at which 2400 guests were present. Over 70 tables were set and a pleasing feature was the seating together of old class-fellows, so that the gathering really resolved itself into a series of class reunions. The hall presented a magnificent spectacle and the whole occasion was a conspicuous success. In giving the toast of "The University of Aberdeen," Lord Balfour of Burleigh paid a high tribute to the virtues of the universities of Scotland; they were, he said, national institutions which had caught the genius of the nation and rendered signal service to the nation at large. They had been animated by a high tone of learning for learning's sake and that was why they had been successful. The banquet was a remarkable event in the University's history and the graduates and students will not readily forget the generous hospitality of Lord Strathcona.

In the forenoon of the 28th excursions were made to places of interest, while in the afternoon a reception was held at the infirmary. The closing functions were an "at home" in Marischal College and a students' symposium in the Music Hall. All the buildings were thrown open for inspection during the former function.

On reviewing, in Professor J. Arthur Thomson's words, the days of celebration one sees again a succession of impressive pictures—the chapel service, the light streaming through a

window and almost transfiguring a well-known venerable thinker who looked like a picture of philosophy; the academic pageant with its dazzling variety of costume winding through the crowded streets; the reception of delegates, when university after university, country after country, marched past the Chancellor leaving addresses of greeting; the capping of the honorary graduates, a phalanx of immortals; the sea of faces filling the quadrangle when the King opened the new buildings; and the feeding the 2400 in the Strathcona Hall. In all these pictures there was immediate stimulus to memory and outlook, to pride and gratitude; but when all the bustle has passed away we feel that they had a significance which grows more impressive as we think over it, which will never lose its hold on those who have felt it all. *Vivat, crescat, floreat Universitas Aberdonensis.*

HOSPITAL AND MEDICAL SCHOOL DINNERS.

St. Bartholomew's Hospital.—The annual dinner of the old students of St. Bartholomew's Hospital took place in the great hall of the hospital on Oct. 1st. Dr. J. A. Ormerod was in the chair and 148 gentlemen were present. The chairman, in proposing "Prosperity to the Hospital and Medical School," took occasion to insist on the unity and mutual inter-dependence of hospital and school. He reviewed the history of the last few years, which had necessarily been a time of anxiety, and the present satisfactory condition of the institution, and said that the material improvements now in progress, the zeal of those who worked there, and the loyalty of old St. Bartholomew's men were certain guarantees of success. Mr. Acton Davis, in responding, affirmed the strong interest taken by the governors in the welfare of the school. He mentioned the approaching completion of the great new block of the out-patient and special departments, and the inception in the immediate future of the pathological block, and following this of the nurses' home. He appealed to old students to interest others in the work. The toast of "The Guests" was proposed by Mr. H. T. Butlin, who, coupling Professor W. Osler's name with it, remarked that his "Practice of Medicine" was in constant use even in the surgical wards. Professor Osler, in responding, observed that he always found surgical wards full of interesting medical cases. He recalled his old days as a student at St. Bartholomew's and referring to the new buildings in progress remarked that though new equipment was important, more important still was the old spirit. He expressed his pleasure at hearing of the inception of the pathological block and said how necessary pathology was to the proper performance of hospital work. Above all he desired to emphasise the immense importance of the presence of medical students in a hospital. He declared that it made all the difference in the way in which the work was carried out. Dr. Norman Moore proposed "The Health of the Chairman," and after dinner an adjournment was made to the library for tea, coffee, and conversation.

Charing Cross Hospital.—The past and present students of the Charing Cross Hospital and Medical School dined together at the Hotel Cecil, Strand, London, on Oct. 1st. The chair was taken by Dr. William Carter of Liverpool, who sat between Professor Ivan Petrovitsch Pawlow of St. Petersburg and Lord Kilmorey, the chairman of the hospital. The toast of "The Charing Cross Hospital Medical School" was intrusted to Lord Kilmorey who delivered himself of an indignant protest against the noise caused by the motor omnibuses in King William-street. He said the noise was so great that the patients in the wards of the hospitals were disturbed in their sleep and he emphasised the importance of diminishing the nuisance. He also explained why it was inadvisable for the hospital to be moved from its present position. Dr. Christopher Addison, in replying to this toast, dwelt on the fact that the number of medical students in London was diminishing. The number of medical students at the provincial centres was increasing but he did not think on that account that the Charing Cross Hospital Medical School need have any apprehension because its defects had been remedied and necessary economies introduced so successfully that the financial year of the school had ended with a small balance on the right side. Dr. T. W. Eden, in a few well-chosen words, proposed the toast of "The Guests," which was replied to by Professor Pawlow and Mr. R. M. Pattison. Professor Pawlow only spoke a few words in German, thanking the students of Charing Cross Hospital for their kind reception of him, and ended with the word "Lebewohl." Mr. James Cantlie, in submitting the toast of "The Chairman," stated that in his opinion the provincial universities, especially the University of Birmingham, had been emptying the London medical schools. After a short reply from Dr. Carter the formal proceedings ended. In the course of the evening Dr. F. W. Mott was called upon to sing and was obliged to give an encore, his rendering of "Here's a Health unto His Majesty" eliciting loud applause.

London School of Tropical Medicine and London School of Clinical Medicine.—The dinner of these two schools was held on Oct. 8th at the Hotel Cecil, and in consequence of the unavoidable absence of the Duke of Marlborough the chair was taken by Sir William H. Treacher. Among those present were the following: Professor Blanchard of Paris, the Director-General of the Royal Navy Medical Service, the President of the Medical Board of the India Office, Sir Dyce Duckworth, Sir Patrick Manson, Colonel Kenneth Macleod, Mr. H. J. Read of the Colonial Office, Dr. Paul Joly of the Ministry of Marine of Paris, Sir William H. Bennett, Mr. Malcolm Morris, Sir Francis H. Lovell, Dr. Guthrie Rankin, Professor W. J. R. Simpson, Mr. L. Vernon Cargill, and Mr. Perceval A. Nairne (chairman of the committee of management). Professor Blanchard gave an eloquent address in French and laid special emphasis on the world-wide reputation of the Tropical School in having attracted to it, among the 40 students now in the laboratories, representatives from the following countries among others: Greece, Finland, Holland, Italy, the United States of America, Guatemala, and Honduras.

St. George's Hospital.—The annual dinner of past and present students of St. George's Hospital was held at the Whitehall Rooms, Hôtel Métropole, on the evening of Oct. 1st, when a company of about 120 supported the chairman, Mr. Clinton T. Dent, senior surgeon to the hospital. The numerous speeches were remarkable for their excellence and their brevity—terms often almost synonymous when they refer to after-dinner oratory. The chairman, who has a happy knack of postprandial epigram, was in excellent vein; and the Bishop of Bristol, who had in the afternoon delivered a most eloquent address at St. George's Hospital, an abstract of which will be found at p. 982, was no less admirable and to the point in his witty and well-delivered speech after dinner. Dealing with medical school statistics Mr. F. Jaffrey was able to state an improvement in the entry figures for the ensuing session. It is satisfactory, therefore, that as a purely clinical school the first steps of this ancient institution seem to tread an auspicious path.

King's College Hospital.—The annual dinner of the old students of King's College Hospital was held at the Hotel Cecil on Oct. 2nd, Professor Nestor Tirard being in the chair. In spite of the wet weather a goodly representation of old friends was gathered together, numbering about 100, and as visitors were General Lord Methuen, chairman of the hospital; Sir Charles Ollivant, K.C.I.E.; the Rev. Dr. Headlam, principal of King's College and vice-chairman of the hospital; Mr. Charles Awdry, treasurer; and Mr. W. A. Pite, architect to the new hospital. Amongst the members of the staff were Professor U. Pritchard, Dr. J. Phillips, Dr. N. Dalton, Dr. J. F. W. Silk, Dr. StClair Thomson, Dr. R. H. P. Crawfurd, Dr. G. F. Still, Sir Hugh R. Beevor, Professor Watson Cheyne, Professor M. McHardy, Mr. F. F. Burghard, Mr. P. T. B. Beale, Mr. L. V. Cargill, and Mr. A. Carless. The army was represented by Colonel A. T. Sloggett, C.M.G., Colonel Bond, and Major Vipan, and the Indian Medical Service by Major R. H. Castor. Notes of regret for non-attendance were received from a number of old friends, and expressions of goodwill and wishes for a successful winter session were exchanged with University College and St. Thomas's Hospitals, the dinners of which were taking place in the same building. In proposing the toast of the evening, "Success to King's College Hospital and its Medical School," Professor Tirard alluded to the two factors which were guiding the evolution of medical teaching at the present day—namely, the centralisation of the earlier studies and the decentralisation of hospitals. Both of these had influenced King's College Hospital to a considerable extent. On the one hand, the clinical school of the hospital had been completely dissociated from the scientific faculty at King's College, into which the departments of anatomy and physiology were now incorporated. Other hospitals showed their appreciation of this arrangement by sending their students to

King's College for their earlier medical studies. The proposed removal of the hospital to a site south of the Thames had been necessitated by the change in its immediate surroundings. Clare Market had disappeared, and Drury-lane and all the slums associated therewith were being opened up and improved, so that the out-patient and casualty departments were steadily falling off in numbers. Lord Methuen, who replied in behalf of the hospital, spoke cheerily of the prospects of success but admitted that much hard work would be needed to carry the enterprise to a successful issue. The Rev. Dr. Headlam also replied on behalf of King's College. The chairman then proposed the health of the visitors, which was responded to by Sir Charles Ollivant. He referred to the recent Elizabethan fair, for which he acted as chairman of committee, and pointed out that the financial result of this effort had been most satisfactory, a sum of £6500 having been handed to the building committee. The chairman's health was proposed by Colonel Sloggett in warmly appreciative terms and was drunk enthusiastically.

London Hospital.—The London Hospital old students' dinner was held on Oct. 1st at the Savoy Hotel. Mr. John Holroyde presided, and among those present were Lord Stanley, Mr. W. Douro Hoare (chairman of the College board), Mr. J. B. Millar (Master of the Grocers' Company), Mr. G. K. Morice, Mr. Rowland Plumbe, Mr. A. R. Bankart, Dr. T. N. Brushfield, nearly all the members of the medical staff, and Dr. Bertrand Dawson and Mr. P. Furnivall, the honorary secretaries. The chairman proposed the toasts of "The King" and of "Queen Alexandra (President of the London Hospital), the Prince and Princess of Wales, and the other members of the Royal Family," which were honoured with enthusiasm. The following telegram was despatched to the Queen:—

> At the annual dinner of the old students of the London Hospital the toast of your Majesty's health has been drunk with the utmost enthusiasm, and the fervent wish expressed that your Majesty may long be spared to your country, and that the assistance your Majesty has been so graciously pleased to extend to the London Hospital, of which your Majesty is President, may always continue.

The chairman, in proposing the toast of "The London Hospital," said the hospital was rich in traditions, its history extending over 160 years. During that period it had trained men whose names had become honoured words in their profession. Its founders and teachers were actuated by a spirit of benevolence of the highest kind. The changes at the London Hospital had been many and great but they had always been in the direction of improvement. In point of organisation, equipment, and administration they might fairly claim that they were second to none. The last year marked the end of their rebuilding scheme, a work which had been going on for nine years and which had made their hospital one of the most complete and up-to-date hospitals in the world. The whole place was instinct with the spirit of modern thought and science, the facilities for teaching and study being unequalled. The entries this year were the highest on record, 89 new students having been entered. Among the factors in their success must be mentioned first and foremost the name of their chairman—the Hon. Sydney Holland—whose absence they all regretted. The hospital was also much indebted to their treasurer—Lord Stanley. Lord Stanley, in response to the toast, said that the London Hospital was somewhat affected by the prevailing shortness of money, although not so much as other hospitals. As regards their efficiency he would make bold to say that the London Hospital was the hospital of the British Empire. It was because people knew that they stood for efficiency that they had suffered less than others in the matter of subscriptions. But they were suffering none the less, and, curiously enough, one reason for this was to be found in their thoroughness. There were some who thought that efficiency could only mean cheapness, but that was not the case. If they saw that a bed at "The London" cost, say, £100, while a bed at another hospital cost £50, they were inclined to think that they would do twice as much good by giving £100 to the cheaper hospital. But there was no greater fallacy than that, for at the London Hospital they were determined to be abreast, if not ahead, of the time, and they had in mind not merely the cure of the individual but the benefit of suffering mankind throughout the world. That necessarily meant that learning and teaching at the London Hospital were expensive and others were learning at their expense. Of that they were glad but at the same time subscriptions should not be withheld from them on that account. As a remedy for the shortage of money they must not for a minute contemplate State aid; he did not think that would spell either economy or efficiency. People must either get richer or become more generous. In addition, he appealed to them all to send their friends to see what the hospital was doing. Visitors would be received with pleasure and he was certain that an inspection would lead to further subscriptions. Mr. E. Hurry Fenwick, who also responded to the toast, said that the hospital was not much thought of in the "seventies," but now the King and Court selected their surgeons from their old students and Aberdeen could not celebrate the quatercentenary of its university without taking a Rector from their ranks. This result was largely due to the governing bodies, the medical council and the general committee. Mr. C. W. Mansell Moullin proposed the toast of "The Chairman," to which Mr. Holroyde briefly responded, and the company separated.

St. Mary's Hospital.—The annual dinner of the past and present students of St. Mary's Hospital and Medical School took place at the Whitehall Rooms, Hôtel Métropole, on Oct. 2nd. The chair was taken by Dr. Montagu Handfield-Jones, obstetric physician to the hospital. After the usual loyal toasts the chairman proposed the toast of "St. Mary's Hospital and Medical School." In reply Dr. H. A. Caley, the dean, referred to recent successes and in particular to the great number of students attracted to the pathological department by the brilliant work of Sir Almroth E. Wright. Dr. F. C. Marthy also responded for the past in a humorous speech. The evening concluded with a capital selection of songs and recitations. Amongst those present, besides the members of the active staff, were Sir Alfred H. Keogh, Sir Anderson Critchett, Mr. Edmund Owen, Mr. Herbert W. Page, and Mr. Malcolm A. Morris.

Middlesex Hospital.—The presentation of prizes and scholarships by the Lord Mayor and the delivery of the inaugural address by Dr. H. Campbell Thomson, which marked the commencement of a new academic year, were followed in the evening by a reunion of old Middlesex students and their friends at the annual dinner in the Empire Hall, Trocadéro Restaurant, at which 154 were present. The occasion was a memorable one, since both the President of the Royal College of Physicians of London and the President of the Royal College of Surgeons of England as members of the consulting staff of the hospital were present, the latter occupying the chair. The loyal toasts having been duly honoured, the chairman, in proposing "The Middlesex Hospital and its Medical School," reviewed the work of the past year, alluding specially to the crisis through which the medical schools were passing and congratulating those present on the completeness of equipment of the institution and its maintenance as an integral and necessary part of the hospital. Lord Cheylesmore, who replied as chairman of the weekly board and of the school council, added some interesting details in regard to the progress of the hospital and school, showing how the work of each had been carried on without any curtailment of extent or efficiency, in spite of the great additional expenses incurred in the re-roofing and overhauling of the building, the establishment of a complete sterilising plant to keep pace with the requirements of aseptic surgery, and various other improvements, though diminished contributions to hospital charities generally had entailed the strictest economy and a special scrutiny into every detail of expenditure, to attain this end. Dr. W. S. Lazarus-Barlow, superintendent of the Cancer Research Laboratories, who had recently returned from the special congress on this subject in Berlin, spoke of the high appreciation accorded to the archives of the Middlesex Hospital by those whom he met there and their remarkable familiarity with the work in progress and the actual members of their staff. Lieutenant-Colonel M. W. H. Russell, R.A.M.C., replied on behalf of the past students, particularly in relation to the Royal Army Medical Corps, in which Middlesex men had ever taken a distinguished share, being concerned in most of the prominent events of the service in recent years. He was pleased to see there was no falling off in that direction and welcomed the new recruits with fervour. Mr. M. L. Hine, who as senior scholar of the year spoke on behalf of the present students, pointed out in a very frank and lucid way some of the immediate wants of the school, his remarks being received with evident sympathy both by the junior members present and those in authority. Sir Richard

Douglas Powell, President of the Royal College of Physicians of London, proposed the health of "The Visitors" and the toast was replied to by Chevalier Wilhelm Ganz who, with Mr. Hirwen Jones, Mr. Richard Green, and Mr. Charles Ganz, added greatly to the enjoyment of the evening by a delightfully rendered musical programme. The health of the chairman having been proposed by Dr. W. E. Wynter and duly acknowledged, a most enjoyable entertainment was brought to a close at 11 P.M.

St. Thomas's Hospital.—Dr. Arthur Newsholme, medical officer of health of Brighton, presided at the St. Thomas's Hospital old students' dinner, held in the banqueting hall of the Hotel Cecil on Oct. 2nd. The attendance of guests was large, covers being laid for over 150. The toast of the evening, that of "The Hospital and Medical School," was proposed by Dr. Newsholme who passed in review the names and deeds of the celebrated medical men connected with St. Thomas's Hospital. He described how the magnificent pile of hospital buildings had impressed him with their beauty when viewed from Westminster Bridge and launching into poetry he quoted from Wordsworth's sonnets the lines:—

> "Earth has not anything to show more fair:
> Dull would he be of soul who could pass by
> A sight so touching in its majesty."

Mr. J. G. Wainwright, the treasurer, replied to the toast and praised the chairman for the scientific distinctions which he had achieved and the public health work which he had accomplished at Brighton. The scientific study of medicine as taught in St. Thomas's Hospital Medical School was highly efficient and afforded every facility for study. The excellence of the laboratories might be taken as a feature of the school. Mr. Wainwright then proceeded to announce that the nurses' new home at the eastern corner of the hospital would be occupied shortly. He also hoped that the new St. Thomas's home for paying patients would be soon in active use and that the more complete privacy arranged for would be appreciated. Whilst St. Thomas's men sent the hospital a great number of patients who could not pay he urged them kindly to remember the very efficient home provided by the hospital for patients who could pay. There was looming before the hospital authorities the absolute necessity in connexion with obstetric teaching of providing a lying-in ward. The matter was therefore occupying their earnest attention. Plans had been prepared for the provision of departments for in-patients and out-patients in connexion with diseases of the throat, skin, and ear, but he was afraid that the financial position of the hospital must call for a halt in capital expenditure. A hospital school council had been established consisting of five members of the staff, five governors, two lecturers, and one representative of the Senate of the University of London. The dean, Mr. J. H. Fisher, who also responded to this toast, said he was sure that the new hospital school council would help forward the work of the school. The toast of "The Chairman" was proposed by Dr. E. C. Seaton and received a suitable acknowledgment.

University College Hospital.—The old and present students of University College Hospital Medical School held their annual dinner at the Hotel Cecil on Oct. 2nd, under the presidency of Professor G. D. Thane, LL.D. The company, which numbered 130, included Sir William R. Gowers, Surgeon-Lieutenant-Colonel H. W. Kiallmark, Professor E. A. Schäfer, Dr. F. T. Roberts, and Dr. T. Gregory Foster, Provost of the College. After the loyal toasts the chairman proposed "University College Hospital and Medical School." In proposing the toast Professor Thane insisted upon the absolute necessity in a properly equipped medical school of ample provision for the teaching of pathology and for pathological research. Upon this must largely depend the future success of the new School of Advanced Medical Studies. Professor Sidney Martin, dean of the Medical School, replied. Professor Schäfer, in a very felicitous speech, proposed "Success to University College" to which Dr. Foster replied. The chairman's health was proposed by Professor H. R. Spencer who referred to the very eminent services which Professor Thane had for so many years rendered to University College. Dr. Roberts and Dr. P. D. Turner sang and the gathering was generally considered to have been one of the most successful that has been held.

Westminster Hospital.—The annual dinner of past and present students of the Westminster Hospital was held on Oct. 1st at the Trocadéro Restaurant. The chair was occupied by Dr. F. de Havilland Hall who presided over a large and representative gathering. After the loyal toasts had been duly honoured the chairman proposed "The Westminster Hospital and Medical School." The dean, Mr. E. Percy Paton, in replying, was able to assure the old students of the very satisfactory working of the new arrangement with King's College Science Department for the teaching of the earlier subjects of the curriculum. He was able to state that the school was in a fair way to a further period of prosperity. Of one thing he was certain—namely, that in the education provided for the student at Westminster they were offering a very good article at a very good price—he might say at an improving price. Mr. A. H. W. Hunt of Wolverhampton, who replied on behalf of the past students, said that he had that day been round the hospital wards and special departments and was much impressed with the completeness of the equipment and the great facilities for clinical work of every description now possessed by the students. The toast of "The Guests" was given in an amusing speech by Dr. Bertram L. Abrahams and was coupled with the name of Dr. J. Barry Ball. Dr. Frederick S. Palmer proposed the health of the chairman, who acknowledged the honour in suitable terms. A suggestion was bruited that for a year or two at any rate the annual dinner should be held in May or June, to facilitate the attendance of country practitioners and those in the services. An expression of opinion on this point by Westminster men would be welcomed by the school.

THE PETITION OF THE METROPOLITAN HOSPITAL SUNDAY FUND FOR A ROYAL CHARTER.

WE have received the following with a request for its publication:—

BRITISH MEDICAL ASSOCIATION.

METROPOLITAN COUNTIES BRANCH.

Memorandum on the Petition and draft Charter of the Metropolitan Hospital Sunday Fund adopted by the Council of the Metropolitan Counties Branch of the British Medical Association at a meeting held on 25th September, 1906,

and

Submitted on behalf of the Metropolitan Counties Branch of the British Medical Association to the Lord President of His Majesty's Privy Council on September 29th, 1906.

With reference to the Petition of the Council of the Metropolitan Hospital Sunday Fund, praying His Majesty for the Grant of a Royal Charter of Incorporation, we, the undersigned, in the name of and for, and on behalf of the Metropolitan Counties Branch of the British Medical Association, comprising 2700 medical practitioners resident in London, believing that we represent the views of the great majority of the medical profession within the metropolitan area, beg most humbly to submit the following points in relation to the Charter in question, namely:

I. That the Metropolitan Hospital Sunday Fund, by its power of determining the conditions upon which contributions to hospitals should be granted, exercises a controlling influence upon the administration of London hospitals, and the petition for a Charter by that Fund is therefore a matter of deep concern to the whole of the medical profession, not only to those practitioners who staff the various hospitals, but also to those who are not so attached.

II. That it has not been sufficiently recognised that hospitals depend for their existence probably as much upon the gratuitous services of members of the medical profession as upon the monetary gifts of the charitable public, and that all medical practitioners, even those not on the staff of any hospital, are therefore deeply interested in the administration of hospitals.

III. That the constitution of the Metropolitan Hospital Sunday Fund fails to provide for any representation in its Council and in its committee of distribution of medical practitioners, who could best guide it in dealing with the medical requirements of hospitals, and that the public interest thereby suffers.

IV. That while admitting cordially the beneficent work carried out by the Metropolitan Hospital Sunday Fund in many respects, we are constrained to recognise that this Fund, as almoners of money collected by public subscriptions, has failed to exercise as much influence as might have been expected in removing such serious defects in our hospital system as are submitted below, viz.:—

(1) That the out-patient departments of London hospitals, as at present conducted, have a pauperising effect on the patients, through the indiscriminate treatment of applicants whose cases are more suited for reference either to provident dispensaries or to private practitioners or to the Poor-law, and that the treatment in out-patient departments of cases that present themselves is frequently ineffective owing to the large numbers of such patients and the absence of that home supervision which many of the cases require.

(2) That the small payments exacted from patients in several hospitals in London which are subsidised by the Metropolitan Hospital Sunday Fund undoubtedly augment the moral injury to patients by creating a false idea that sufficient payment is being made, and are more unfair to private practitioners and provident dispensaries in the neighbourhood of such hospitals than absolutely gratuitous attendance. It must be understood, however, that this does not apply to cottage hospitals where payments for maintenance are made and patients treated by their own medical attendants.

(3) That in our opinion the out-patient departments should only be used for important and selected cases referred for consultation by private practitioners or provident dispensaries, and thus centres of clinical interest would be created to the great advantage of scientific medicine and surgery and the improvement of material for clinical teaching.

(4) That the casualty departments of general hospitals are especially abused by the admission of trivial cases of accident and sudden illness which might quite well be treated elsewhere, and, while we perfectly recognise the necessity of supplying first aid without question to really urgent cases, there is, in our opinion, no justification for the very large numbers who obtain gratuitous treatment in the casualty departments of such hospitals.

(5) That while regarding the employment of trained almoners in all departments of hospitals as indispensable, we are of opinion that subscribers' letters should be abolished, and, so far at least as clinical suitability for hospital treatment is concerned, medical practitioners should alone recommend.

(6) That the existing efforts to promote forethought, thrift, and independence among the working classes by means of provident dispensaries would in our opinion be more successful if the competition of out-patient departments and free dispensaries were removed.

(7) That many of the out-patients of hospitals belong to the destitute class who are fit subjects for treatment under the Poor-law, apart from economical considerations, as it is not so much the mere administration of physic as food and other comforts which they require.

(8) That the hospitals to a great extent compete with and encroach on the field of work and limit the experience of medical practitioners by undertaking cases which are neither clinically nor financially suited for hospital treatment, to the ultimate detriment of public interests.

V. That the coördination and coöperation of hospitals and other medical charities, and of members of the medical profession practising in the metropolis, are especially necessary in the metropolitan area for the removal of the abuses which we have noted, and in our opinion an important step towards this would be attained by securing the adequate representation of the medical profession upon the Council of the Hospital Sunday Fund as constituted in the proposed Charter.

We would, therefore, humbly pray that all the matters set forth in this memorandum may receive favourable consideration, and to this end we crave that His Majesty may be pleased to withhold his sanction to the Grant of the proposed Royal Charter of Incorporation to the Metropolitan Hospital Sunday Fund in its present form.

Signed, on behalf of the Metropolitan Counties Branch of the British Medical Association, and by order of the Council of the said Branch, by

HUGH R. KER, F.R.C.S. Edin.,
President of the Metropolitan Counties Branch, British Medical Association.

J. FORD ANDERSON, M.D.,
Chairman of the Medical Charities Committee of the Metropolitan Counties Branch, British Medical Association.

September 29th, 1906.

THE SPECIAL REPORT ON THE ALLEGED INCREASE OF INSANITY IN IRELAND.

THIS report is a supplement to the fifty-fourth report of the inspectors of lunatics in Ireland and is based on the lunacy statistics of the ten years 1894–1903, in the light of the census of 1901, together with special reports from the district asylums. The inspectors in a similar report in 1894 arrived at the conclusion that "the great increase of the insane under care was mainly due to accumulation and was, so far, an apparent and not a real increase." In Ireland the diminution of population from 6,500,000 in 1851 to less than 4,500,000 in 1901 makes the problem of the increase of insanity much more complex. The rise per 10,000 of the population has been from 15·2 to 56·2 but the inspectors estimate that if the population of Ireland had increased *pari passu* with that of England and Wales, the above ratio would be only 41·5 for Ireland, as compared with 40·8 in England and Wales and 45·4 for Scotland. The reduction of population having been due to the emigration of the sane, the insane population has remained and has even been increased by the return of cases of mental breakdown amongst the emigrants. The above estimate shows that even with this drawback the alleged increase closely corresponds with that of the rest of the United Kingdom.

The age periods in Ireland, as in England, give most important information in regard to the excess of recorded lunacy. Thus, in 100,000 persons living at the age period under 20 years in 1871 the proportion of lunatics was 92·4, reduced to 74·1 in 1901; in the age period 20 to 55 years the similar figures showed an advance from 517·2 to 848·5; and in the age period upwards of 55 years the advance was from 372·7 to 1062·1. Relatively to the population at large, the decrease of lunatics under 20 years was equal to the general decrease; in the middle period there was an increase of 64 per cent. and in the later period of life an increase of 185 per cent. These figures show on analysis that of the census-recorded lunatics the number per 1000 (excluding fractions) was as follows:—

	1871.	1901.
Under 20 years	136	54
From 25 to 55 years ...	694	677
55 years and upwards ...	170	289

This proves that in Ireland, as in England, there has been a proportional relative diminution in the lowest age period, a slight diminution in the middle, and a very great increase in the late age period of the lunatic population.

The first admissions to asylums have increased from 2600 in 1894 to 3332 in 1903, and this on a slightly diminished population. Unfortunately, the ages of these first admissions as a whole cannot be arrived at from this report. The superintendent of the Ballinasloe Asylum, Dr. J. Mills, states that in his admissions in 1891, 7·96 were over 60 years of age and this percentage had increased to 14·45 in 1901, an advance of 6·49. This increase if general would alone account for nearly a quarter of the excess of admissions. The inspectors also draw attention to the fact that in the last census the numbers of unofficial lunatics had diminished from 4500 in 1891 to 3420 in 1901. The balance of 1080 have been admitted to asylums as newly occurring cases. This is rendered evident by the fact that of the admissions in 1894 the disease was stated to have existed for upwards of five years in 8·3 per cent. and in no less than 11·4 in 1903. The emigrants returning insane from the United States, &c., must also have contributed to the first admissions.

The admissions of cases in which mental disease had existed for less than one year are reported as having risen from 1807 in 1894 to 2237 in 1903, an increase of 430, these yielding a proportion per 10,000 of the estimated population at the respective periods of 3·94 and 5·07. In regard to this large increase of 28·7 per cent. the inspectors remark "that there is nothing to show that the cases of first attack were taken from the young and vigorous members of the community. As we have shown elsewhere, a large proportion of them were cases of dotage or senile decay who had never previously been insane."

The accumulation in asylums is also considered in respect to increased longevity, shown by the low death-rate, which is in part due to the small amount of general paralysis. The various causes of insanity are also dealt with, but no causes of great increase are found, the most potent factors remaining stationary or showing only such excess as may be accounted for by greater opportunities of inquiry. Returned emigrants, exclusive of those cared for in their own homes, furnish no less than 1450 of the asylum population; in connexion with this fact attention is drawn to the large proportion of insane in the United States of Irish origin as an evidence of the greater proneness of the Hibernian Celt to mental disease.

The asylum superintendents who report on the question of the alleged increase of insanity in seven instances answer in the affirmative, in four in the negative, whilst in 12 no opinion is expressed.

In conclusion the inspectors state that "without venturing to affirm that there has been no increase of occurring insanity," the great numerical excess has been due to various conditions. Chief among these are the emigration of the sane, the retention of the insane, and the return of insane emigrants, the excess being mainly among the rate-supported, who accumulate in asylums from greater longevity, from the absorption of the unregistered insane, the widening of the application of the term insanity (to include the eccentric, feeble-minded, and dotard), the greater confidence in the treatment, and the greater accessibility of asylums. The conclusions to be drawn from this report are that the great excess in the number of persons classed as insane is not due to a corresponding advance in the occurrence of mental disease; and that there is considerable doubt whether the excess in the number of persons admitted to

asylums for the first time at the present date is not entirely due to social conditions and not to an actual increase in the production of insanity.

MEDICINE AND THE LAW.

A Garbage-monger Heavily Fined.

Bertie Letch, described as a butcher and proprietor of a bullocks' head, spiced beef, and tripe shop in Salmon-lane, Limehouse, was recently fined £10, with £4 4*s.* costs, for having in his possession what may be described as an unusual quantity and variety of meat unfit for human food. The inspector, who visited his premises on a Sunday, asked him whether he had any unsound food and he replied that he had not, thereby shutting himself out from the possibility of saying afterwards that what was found was there to his knowledge and was intended for destruction, not for sale. Afterwards in a barrel the contents of which the defendant described as "all right" were found two and a half hundredweights of ox cheeks, all of which were unsound. He declared that he had nothing else upon his premises in such a condition but in a tank were three-quarters of a hundredweight of tripe and cow-heels equally unfit for human consumption and in an ice-safe were six enamelled receptacles, one of which contained spiced beef which had gone bad and the rest of which held other beef which showed traces of having been run over by rats. With the exception of a few pieces, a quantity of tripe cuttings and bullocks' hearts and cheeks found in the shop were all unsound. The Sunday trade is considerable in such a locality as that described and the inhabitants are to be congratulated upon the protection which the local authority was able to afford them through its medical officer of health, Mr. D. L. Thomas, and the inspectors working under him.

Unnecessary Noises.

The magistrates at Walton-on-Thames are to be congratulated upon having dealt firmly with a defendant summoned before them in respect of a noise nuisance which, from the description given before them, must have been of an unusually obtrusive nature. The defendant, a widow, living in King's-road, Walton-on-Thames, kept upon her premises hens spoken of as being 60 in number, two cocks, some doves, six ducks, seven cats, and three dogs. One of the complaining witnesses stated that he was a musical composer who had been unable to carry on his work properly through being deprived of his sleep and that he had also suffered from neuralgia. Another neighbour and his father, who had stayed with him, also gave evidence of a similar character. From a practical point of view those suffering from neighbours who keep noisy animals will find it advisable, if they wish to set the law in motion, to obtain the coöperation and support of as many as possible of those living within earshot. Magistrates who have before them a single witness only may regard him as a person naturally sleepless or prone to complain. The evidence of several respectable persons, all evidently desirous of putting a stop to an evil which affects them injuriously, is likely to prove irresistible. The defendant, moreover, is not likely to have many such witnesses on his side. In the case at Walton-on-Thames the defendant was fined £2 with costs amounting to £2 13*s.* 6*d.*

Kissing the Book and the Prevalence of Perjury.

His Honour Judge Edge in connexion with a recent case tried by him at Clerkenwell county court made some forcible observations upon the prevalence of perjury in courts of justice, saying that he considered it to be in the power of Parliament to do much to check it. Presumably Judge Edge would wish to see perjury dealt with more summarily than is now possible, with powers given to county court judges and others to order proceedings to be instituted against persons who appear to them to have committed the offence. Many judges of the High Court as well as county court judges deplore the frequency of perjury and neither they nor Judge Edge seem to think that the amount of "sanctity" imported into the taking of an oath by the custom of kissing a Testament contributes much towards the truthfulness of the witnesses before them. The county court judge at Clerkenwell, who may be taken to have considerable experience of unscrupulous litigants and their friends, said on the occasion referred to that persons appearing before him went into the witness-box and took the oath knowing that they were going to make statements altogether the opposite of truth; they did it knowing that there was little chance of being punished and they lied with a coolness and deliberation which was enough to stagger their hearers. Those who advocate upon sanitary grounds the substitution of a publicly spoken pledge to tell the truth for the touching of a greasy book with the lips should have support from all who desire to see perjury diminished. The probability of more or less immediate punishment combined with a more solemn manner of swearing could hardly fail to have a beneficial effect.

THE LONDON MEDICAL EXHIBITION.

(Concluded from p. 950.)

NOT less comprehensive than the exhibition of pharmaceutical preparations noticed in our last week's issue was the display of surgical and sanitary appliances, most of the leading makers being represented. Under this category may be included the "equipoise" beds, couches, and chairs exhibited by the Equipoise Company, of Ashford, Kent. The advantages of these apparatus are obvious, inasmuch as they are so arranged that the occupant can by merely bending the body and without undue exertion raise himself from the prone to the sitting position and *vice versâ*, being able to stop wherever he wishes and by means of a convenient handle the angle can be fixed. Messrs. Allen and Hanburys, Limited (48, Wigmore-street, Cavendish-square, London, W.), exhibited aseptic hospital furniture and amongst other things a new improved metal aseptic all-metal hypodermic syringe with interchangeable needles. The exhibit included surgical apparatus and some special apparatus for clinical work. Lints, sponges, gauzes, and plasters were the feature of the stall of Messrs. Johnson and Johnson (104 and 106, Golden-lane, London, E.C.). There were also on this stall sulphur and formaldehyde fumigators and antiseptic tablets. Messrs. Cuxson, Gerard, and Co. (Crown Buildings, Corporation-street, Birmingham) exhibited a well-assorted list of antiseptic and aseptic surgical dressings and appliances, including lints, wools, and gauzes, contained in cartons and compressed tablets. The Barker vibratory massage machine (Mr. James Barker, 99, Regent-street, London, W.) attracted the attention of a good many medical men. The machine is perfectly simple as regards its design and for motive power it is simply attached to an electric lamp socket. Its maximum activity is stated to be 20,000 movements per minute which can be quickly modified according to the requirements of the operator. Messrs. Southall Brothers and Barclay, Limited (Lower Priory, Dalton-street, Birmingham), exhibited their well-known sanitary towels. Full-sized towels were also shown, reduced by pressure into a very small compass. The exhibit included sanitary sheets and accouchement sets and a number of pharmaceutical preparations. Hoefftcke's appliance for fractured leg (the femur, tibia, and fibula) has already been described in our columns (C. A. Hoefftcke, Limited, 21, Woodstock-street, Oxford-street, London, W.). There were also shown an appliance for paralysis, a leather corset, and some "walking appliances." Messrs. Fassett and Johnson (31 and 32, Snow-hill, London, E.C.) exhibited an absorbent wadding known as thermogene. The exhibit included also specimens of argyrol, a powerful bactericidal silver salt free from irritating properties. A very large assortment of forceps, probes, and catheters were exhibited by Messrs. S. Maw, Son, and Sons (7 to 12, Aldersgate-street, London, E.C.). Messrs. T. Holland and Son (46, South Audley-street, London, W.) made a special feature on their stall of their well-known improved instep arch sock. Specimens also of natural shaped boots and surgical boots could be inspected. An interesting exhibit, comprising the "diagna" hospital bedstead and the "diagna" surgical bedstead, was that of Messrs. John and Joseph Taunton (Birmingham). There was also a child's anti-accident safety cot. A large assortment of specially constructed catheters, bougies, and other appliances of the kind was exhibited by Messrs. Croydon and Co. (55, Wigmore-street, Cavendish-square, London, W.). Mr. C. M. Holmquist, electrical engineer (57, Edgware-road, London, W.), showed a sunbeam semi-reclining electric-light bath and a mercury vapour lamp used for the generation of ultra-violet rays for

Finsen treatment and many other purposes. Antiphlogistine is now well known as the name of an excellent hygroscopic and antiseptic dressing prepared by the Denver Chemical Manufacturing Co. (110, Cheapside, London, E.C.). It is an admirable method for the continuous application of moist heat in all conditions in which inflammation and congestion are present. In addition to pumiline essence for use in throat, bronchial, and lung affections Messrs. Stern and Co. (Cheadle, Hulme, Manchester) exhibited inhalers for administering this pure limpid pine essence. Amongst the specialities exhibited by Messrs. F. Davidson and Co. (140, Great Portland-street, London, W.) were ophthalmic appliances and models of the eye, ear, and throat, the exhibit including a direct ophthalmic illuminator and a number of accumulators for medical use. Mr. Frank A. Rogers (327, Oxford-street, London, W.) exhibited his well-known and approved form of standard medical sprays and atomisers. An ingenious thermocautery for surgical work was shown by Mr. W. H. Beach (Bridgnorth, Salop), and in addition an ophthalmic thermocautery, a tracheotome, and a special porous medicated plaster. The O'Connor Extension Company (2, Bloomsbury-street, London, W.C.) exhibited their appliances for the lame, and as well a surgical-boot to compensate for slight shortening of the leg. Close by was a new obstetric bedstead exhibited by Messrs. Isaac Chorlton and Co. (4B, Upper Thames-street, London, E.C.). An excellent assortment of up-to-date x ray and electrotherapeutic apparatus was exhibited by Messrs. Harry W. Cox, Limited (1A, Rosebery-avenue, London, E.C.), and on an adjoining stall the Seamless Rubber Company (4, Snow-hill, London, E.C.) exhibited operating and obstetrical cushions, bed-pans, and urinals, and surgical, operating, and dissecting gloves. The London Surgical Depôt (17, Little Tichfield-street, London, W.) showed a very large assortment of surgical instruments, including those employed in obstetric practice and for operations on the throat, nose, eye, and ear. The Repello clinical thermometer is now well known as an instrument which does not require shaking down in order to reset the mercurial column. Mr. Zeal, the inventor (82, Turnmill-street, London, E.C.), also exhibited an aseptic clinical thermometer. Aseptic furniture, surgical dressings, and complete outfits for aseptic surgical operations were the chief objects of interest in the exhibit of the Hospitals and General Contracts Co., Limited (33 and 35, Mortimer-street, London, W.). Besides the Hedley inhaler, Messrs. Hedley and Co. (92, Harrow-road, Leytonstone, London) exhibited specimens of their pure ethyl chloride and the same anæsthetic in conjunction with iodoform, or cocaine, or menthol, or carbolic acid. Whilst referring to anæsthetics, mention may be made of Novocain, which is described by the Saccharin Corporation, Limited (165, Queen Victoria-street, London, E.C.) as the new non-irritant local anæsthetic. Novocain is said to be six times less toxic than cocaine and two to three times less toxic than substitutes hitherto presented when given in doses producing an equal degree of anæsthesia. Chemically it is the hydrochloride of para-amino-benzoly-di-ethyl-amino-ethanol.

The foods exhibited were chiefly of a special kind, as, for example, "Miol," which is described as the new iodophosphated malto diastase (The Miol Manufacturing Company, 66, Southwark Bridge-road, London, S.E.) It is an easily digested oil, or rather emulsion of olive oil and malt extract, containing accurately gauged amounts of free iodine and phosphorus. It is a variant of the ordinary malt extract and cod-liver oil emulsion and evidence is furnished of its value in cases of wasting diseases and especially pulmonary tuberculosis. Messrs. Theinhardt's Food Co. (Seething-lane, London, E.C.) exhibited their soluble infants' food, the composition of which shows that it contains the elements necessary for the nutrition of the infant. Messrs. J. Reynolds and Co., Limited (Albert Flour Mills, Gloucester), exhibited what is described as a pure digestive wheatmeal and the foods prepared with it were excellent to the taste and evidently contain a complement of the nourishing materials of the berry. Modified cows' milk was the chief article exhibited on the stall of the Aylesbury Dairy Co., Limited (St. Petersburgh-place, Bayswater, W.). The farms of the company are under strict scientific supervision, the products are carefully standardised, and the milk is kept under strictly clean precautions. The Protene Co., Limited (36, Welbeck-street, New Cavendish-street, London, W.), exhibited samples of their pure milk proteid products. Protene is said to be an entirely British product. The exhibit included some diabetic foods. A series of starchless foods for use in diabetes and obesity was tastefully arranged on the stall of Messrs. Callard and Co. (74, Regent-street, London, W.). The foods included starchless breads, biscuits, cakes, marmalade, jam, fruits, jujubes, jellies, and beverages. Modified milk for infant feeding was the feature of Messrs. Clay, Paget, and Co.'s exhibit (71, Ebury-street, London, S.W.) There was included also a sugar-free milk adapted to the dietary of patients suffering from diabetes. There was a long list to choose from on the stall of International Plasmon, Limited, of foods enriched with plasmon as well as samples of pure plasmon itself (Farringdon-street, London, E.C.). Ovaltine (A. Wander, 24, Queen Victoria-street, London, E.C.) we have already described in our analytical columns. It contains lecithin derived from fresh eggs and is on the whole so prepared as to be a highly nutritious and palatable article of diet.

Amongst the sanitary exhibits may be included the germicidal fluid of Jeyes Sanitary Compound Co., Limited (64, Cannon-street, London, E.C.) We refer to cyllin, a non-toxic bactericide. It may now be obtained in the form of inhalant, capsules, syrup, gauze, lint, soap, and pastilles. Soap is a decidedly sanitary article of use and one of the best soaps prepared as regards its purity, economy, and detergent power is Vinolia soap of the Vinolia Company, Limited (Malden Crescent, London, N.W.). The exhibit included Vinolia cream and powder and a number of other excellent toilet products. Messrs. Doulton and Co. (Royal Doulton Potteries, Lambeth, London, S.E.) exhibited a germ-proof filter constructed of white porcelain which is stated to prevent the direct transmission of organisms. A testimonial in its favour is the fact that this filter is used for obtaining sterile filtrates in bacteriological laboratories.

Amongst the miscellaneous exhibits may be mentioned certain mineral waters. Messrs. Ingram and Royle (East Paul's Wharf, 26, Upper Thames-street, London, E.C.) exhibited in this connexion samples of Vichy water, Æsculap water, Friedrichshall water, and many other well-known mineral waters. To these may be added Perrier water derived from a natural spring at Les Bouillenes Vergeze (Gard), France. It is a pleasant water, gently sparkling with carbonic acid gas and is peculiarly soft to the taste. Samples of this water were also exhibited on the stall of the Perrier Company (45 and 47, Wigmore-street, London, W.). The water is only slightly mineralised and is antacid owing to the presence of carbonates. The Salutaris Company (236, Fulham-road, London, S.W.) exhibited both their aerated and still distilled water. Messrs. Weston and Westall (16, Eastcheap, London, E.C.) exhibited Droitwich brine crystals which when dissolved in water in prescribed proportion give a solution identical with the liquid brine used in the baths at Droitwich. In addition to sparklets for aerating water with carbonic acid gas, Messrs. Aerators, Limited (Upper Edmonton), showed an apparatus for extinguishing fire by means of carbonic acid gas and water under pressure. Messrs. Idris and Co. (Pratt-street, Camden Town, London, N.W.) exhibited a number of table waters which are now well known for their purity, the processes connected with their preparation being under strict scientific control. The exhibit included a radio-active natural Hungarian aperient water known as Igmandi water. Messrs. Gautier Frères (Cognac) exhibited their special Cognac brandy which is said to be 20 years old. We have already favourably commented upon this brandy for medicinal use in our analytical columns. Similarly we have already remarked upon the practical absence of acidity and sugar in the special whisky of Messrs. George Back and Co. (13, Devonshire-square, Bishopsgate-street, London, E.C.).

Lastly may be mentioned that the following publishers exhibited a series of medical, surgical, and scientific books: Messrs. Baillière, Tindall, and Cox (8, Henrietta-street, London, W.C.), Messrs. Constable and Co. (16, James-street, Haymarket), the W. B. Saunders Company (9, Henrietta-street, London, W.C.), Messrs. Cassell and Co. (Ludgate Hill, London, E.C.), and the Oxford University Press (Amen Corner, London, E.C.). We may add that the exhibition included what is described as an absolutely safe lamp, known as the New Petrolite Lamp (Petrolite, Limited, 106, York-road, Lambeth, London, S.E.). The lamp burns ordinary petrol which is contained in an absorbent. The flame of the petrol impinges upon an ordinary incandescent mantle. We can well believe, judging

from its construction, that the lamp is safe and it should prove a great convenience for the lighting of country houses and other places where neither gas nor electricity is available.

ELECTION OF DIRECT REPRESENTATIVES UPON THE GENERAL MEDICAL COUNCIL.

WE have received the three following addresses of candidates with requests for publication:—

SIRS,—I shall be obliged by your allowing me to inform your readers and the general body of practitioners that I am a candidate for one of the three seats allotted to Direct Representatives of our profession which will become vacant in November next at the General Medical Council. This is the first occasion at these elections at which I shall have figured as a candidate for one of these seats, and I must necessarily be unknown to many of my professional brethren in the large constituency of England and Wales which comprises the electorate in this instance. But I am thankful to say that I am well known in Wales where I have been in general practice since 1871, and as I have been honoured by the confidence of the Swansea division of the British Medical Association, who have appointed me to voice them at every representative meeting since that new departure in the government of the Association was initiated at Swansea, I may fairly say that I am well known to the many gentlemen who have at its different meetings formed the *personnel* there. As a proof of this fact I may say that at the last and at the preceding representative meetings I was elected a member of the Medico-political Committee of the Association and, as a result, I have given much time and attention to the important matters which we discuss there on the subjects embraced by its title and I have also worked on the contract subcommittee of the same parent committee. For this work I consider I have had a long and fitting training, for in addition to the fact that I have always been a general practitioner, holding in my time large contract appointments, I have been the chairman of the Medical Practitioners' Association of Swansea, which has had much work to do in the control of club and dispensary practice in my town. Other offices which I have held in the British Medical Association have been those of President of its South Wales and Monmouthshire branch and Chairman of the Swansea division, and at the representative meeting held in London in July last I received what I regard as an extremely high honour—the appointment, at the hands of my fellow members, of the deputy chairmanship of the meeting. I therefore consider that I am warranted in soliciting the support of the general body of practitioners at this election on the score of past and present work. I have emphasised my position as a general practitioner, as I consider, in common with other candidates at the coming election, that a Direct Representative should be chosen from this class of medical men. Direct representation was obviously granted to us with a view to our sending to the Council men who are in touch with general practice. The consultant class are already, to my mind, too fully represented there, for the great bulk of the Council consists of representatives of the universities and qualifying corporations in the kingdom. I am in favour of an equalisation of representation of the two classes, to be obtained by some measure like that which is formulated in the Medical Acts Amendment Bill now being promoted by the British Medical Association. I am in favour of the one-portal system of final professional examinations. If I am returned at this election my votes at the Council will always be given in the direction of the suppression of quackery and towards securing to all registered medical practitioners the full rewards due to them for their work. One main reason for the existence of this body is the controlling of examinations for fitness to practise and the supervision of the same. I am in favour of raising the standard of the preliminary examinations before entering upon student life. In these days of specialising we ought to see that those who enter an intellectual profession like that of medicine have had more than a mere smattering of Arts to fit them for the severe and prolonged course of study which they are called upon to undergo after they have entered the medical schools. Finally, I hope that a very great majority of the voters entitled to the suffrage at this election will exercise that privilege when November comes. Too long it has been the custom to ignore this duty and, as one who desires to see every means of advance in our calling seized when an opportunity occurs, I deplore the apathy shown in previous elections. At the last one I learn that only about half the number of voters on the list exercised their right to secure the return of candidates. Let me venture to express a hope that in November next at least 90 per cent. will vote and that, as a result of that vote, I may secure the honour of being one of the three Direct Representatives for England and Wales.

I am, Sirs, yours faithfully,
H. A. LATIMER, M.D. Durh., M.R.C.S. Eng.,
Swansea, Oct. 9th, 1906. L.S.A. Lond.

SIRS,—For the election of three Direct Representatives to the General Medical Council, to take place in November, I have been urged to offer myself as one of the candidates. A strong feeling has been expressed that there should be additional general practitioners on the Council in order to bring that body more into touch with the needs of the medical profession throughout the country than it is at present. I have therefore consented to stand.

I am a graduate of the Royal University of Ireland and have been for 21 years a general practitioner and for the last 17 years have been a member of the health committee of the Battersea borough council. I was elected a delegate for that borough to the Health Congress at Exeter and also to the International Congress on Tuberculosis held in London. I am familiar with club, contract, and dispensary work and, knowing only too well how we are sweated in these directions, I have, and would again, support any duly considered scheme which would enable us to obtain fair payment for our services.

I am in favour of adequate remuneration for medical men called in under the Midwives Act, and will persistently urge the General Medical Council, if elected by you, to petition the Privy Council for a prompt amendment of the Midwives Act in that direction. Also in the revision of the rules of the Midwives Board will see that due regulations are prepared to prevent registered midwives persistently canvassing, advertising, and covering, as is at present done in many districts, to the detriment of the general practitioner. I will support alteration in the lunacy laws, which are at present antiquated, reactionary, and in many cases injurious to the patient. I will strongly support alterations in the Coroners Act, so as to obtain proper remuneration for services rendered by general practitioners and pathologists, and to prevent any interpretation making it possible for the local profession to be ignored in favour of the latter. I will support an Inebriates Act, by which those suffering from alcoholism and the drug habit can be saved from themselves.

I am in favour of nurses' registration, so as to prevent, to the detriment of the public, certain persons masquerading in nurse's dress, but would see that the general practitioner is adequately represented on the central and all local boards formed for their control. I would urge revaccination with a proper supply of free Government lymph. I would support security of tenure for medical officers of health, public vaccinators, and holders of all similar public medical appointments. I would be in favour of registration with regard to all patent and secret remedies so as to compel the vendor to state the ingredients and quantities on the label.

I am in favour of hospital reform and will support adequate representation of the general practitioner of charitable funds for the same, feeling that in this way many of the present difficulties will be disposed of. I have been twice a representative at the representative meeting of the British Medical Association and have been elected for two years on the Medico-Political Committee.

I am strongly of the opinion that the interests of the public and the general practitioner are identical, and that by further extension of the powers already possessed by the General Medical Council in the above directions they will be in reality carrying out the spirit of the Medical Acts. If elected I will faithfully endeavour to work for the interests of the general practitioners and should at all times be pleased to keep in touch with their wishes.

I am, yours faithfully,
LEONARD STRONG MACMANUS.
Mayo House, Spencer Park, Wandsworth Common, S.W., Oct. 8th, 1906.

SIRS,—The selection of Direct Representatives for the General Medical Council will shortly take place. There are

more than 20,000 general practitioners in England and Wales and they ought to make their influence felt in the General Medical Council by electing Representatives from their own ranks. The Council at present is composed almost entirely of gentlemen who are consultants or professors representing the various Universities, corporations, or schools, no doubt of great excellence, but who, *ipso facto*, can have but little sympathy with the trials and difficulties of the rank and file of the profession.

I have been throughout my medical career a general practitioner, and in addition to the varied experiences as such have held the appointments of district medical officer, public vaccinator, club surgeon, and am at present medical officer of health, and a certificated factory surgeon. I have been chairman of the Altrincham division, and for many years a member of the council of the Lancashire and Cheshire branch of the British Medical Association, and I am a member of committee of the International Medical Congress, having represented various bodies at the congresses of Moscow, Paris, Madrid, and Lisbon. I think I may justly claim that there is nothing influencing the life of a general practitioner that I am not practically and personally conversant with.

There is no doubt that the legislation of the past 20 years has decreased by at least one-third the earning power of the general practitioner and in this direction I was strongly opposed to the recent Midwives Act and am equally so as regards the State registration of nurses, considering that both these measures place in the field unqualified practitioners who directly compete with and undersell the medical men. I consider drastic treatment is required in regard to prescribing by chemists, sale of patent medicines, bone-setters, and other quacks in which respects this country is so far behind continental nations.

Finally, as one of the first who received his education at Epsom College, as the son of a medical man and the father of two, I feel that I have strong claims on the regard and support of my profession, which I now ask for, but more especially do I appeal to the general practitioners of England and Wales to elect one from among their own number.

I am, Sirs, yours faithfully,

CHARLES J. RENSHAW, M.D.,
M.R.C.S., F.F.P.S. Glasg., M. & L.S.A.

Ashton-on-Mersey, Oct. 9th, 1906.

Looking Back.

FROM

THE LANCET, *SATURDAY*, Oct. 11th, 1828.

Dr. STEWART wished to know, seeing many accoucheurs present, whether there was any foundation for supposing that surprise, desire, or any emotion of the mind of a mother, could have any influence or effect on her child in utero. The subject had been a good deal before the public of late, through the medium of the newspapers. Should it be ascertained, that children could be born with their father's name, for instance, distinctly written in their eyes, or on their foreheads, this might produce a very serious result as to a number of those yet unborn. (Laughter.)

Mr. WALLER considered the notion to be wholly without foundation; first, because of there being no nervous communication between the mother and child; secondly, because many women were frightened, and had desires of different sorts, whose children were born without any marks; and, thirdly, because marks were found upon fœtuses at all periods of gestation, and where no particular emotions of the mind could be distinctly traced to have occurred in the mother.

Several Members spoke on this subject, and many cases of marked children were brought forward; some of them ludicrous enough. A woman, for instance, *on the day before* her delivery of a *nine months'* child, was frightened by a sailor mendicant raising the stump of his right arm before her, the arm having been amputated, and *the child was born without its right arm!* A goose ran cackling at another woman, a month before her confinement, and the child, though the mother denied having been frightened, was *web-fingered!* Another child had the figure of a *mouse* on its face, and whenever a *cat* entered the room, that part of the image on the face which was considered to be the mouse's *tail, curled up!* (Great laughter.) The conclusion was, that the fact of children being born with these marks, is indisputable, but that the cause which produces them is involved in profound mystery.[1]

Public Health and Poor Law.

LOCAL GOVERNMENT BOARD.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On an Outbreak of Enteric Fever associated in Some Cases with Cerebro-spinal Symptoms at Fincham, by Dr. R. A. FARRAR.[2]—Between October, 1905, and March, 1906, some 33 persons in the village of Fincham, near Downham, in Norfolk, were attacked by the epidemic which forms the subject of this report. The population of Fincham is only about 530, so that relatively the outbreak was one of considerable severity. Many of the patients suffered severely and four deaths occurred. Of the 33 cases 12 occurred in adjacent houses in Banyard's Yard, one of these houses being that of a milkman, L., who had himself been ill, together with six members of his family. L. seems to have been the first person in the village to be affected. His attack was not severe enough to keep him to his bed and for three weeks in November he continued, though feverish and ill, to carry on his milk business. This consisted in personally milking two cows and distributing the milk to some 20 households. 11 of these households were subsequently attacked by the epidemic and out of 21 cases not living in Banyard's Yard at least 14 seem to have taken L.'s milk. The well in Banyard's Yard, the water of which was used by the inhabitants for drinking and by L. for washing his milk utensils, was obviously liable to pollution from household slops which had been thrown on to the surface of the yard or which had soaked into the soil near the well in consequence of the yard drains or gullies becoming blocked. Chemical analysis of the water gave evidence of considerable, and probably recent, sewage contamination, and the bacillus coli was present in 1 cubic centimetre. Dr. Farrar considers it probable that the well water became specifically infected (possibly by some visitors from Poplar to Banyard's Yard in August); that the Banyard's Yard cases were attributable to the infected drinking water; and that most of the remaining cases in Fincham were infected by L.'s milk which came from pails washed with water from the same well. The doubt which existed as to the nature of the epidemic was resolved by post-mortem examination in two instances in which typical ulceration was found and the bacillus typhosus was recovered in pure culture from the spleen, and by a series of agglutination tests. Dr. Mervyn H. Gordon tested the blood in 25 cases. In all these cases, when a sufficient interval had elapsed since the onset of the illness, agglutination developed in a dilution of 1 in 20, and in many of the cases the reaction appeared within half an hour with much greater dilutions. The unusual feature of the epidemic was that while certain of the cases, particularly those occurring late in the epidemic, clinically were typhoid fever of ordinary types, others, including some which were severe or fatal, were distinguished by the early appearance and persistence of cerebro-spinal symptoms. In some instances the onset of the disease was marked by severe pain in the head, neck, and spine. Opisthotonos, spinal hyperæsthesia, Kernig's sign, and tache cérébrale were noted in several of the cases which Dr. Farrar describes. The epidemic, indeed, was originally regarded and reported as one of cerebro-spinal meningitis by Mr. G. B. Masson, who attended the Fincham cases, and Dr. Farrar, after giving an account of the cases in question, concluded that on clinical grounds alone there was ample warrant for this diagnosis. Dr. Gordon searched for Weichselbaum's micrococcus in nasal swabs taken from many of the patients but with

[1] Excerpt from the proceedings of the London Medical Society, Oct. 6th, 1828.

[2] London, Wyman and Sons, Fetter-lane; Edinburgh, Oliver and Boyd; Dublin, E. Ponsonby. No. 238, price 4*d*.

negative results. In describing an outbreak simulating influenza in Hertfordshire in 1905 Dr. R. A. Dunn and Dr. Gordon laid stress on the presence of the micrococcus catarrhalis and its differentiation from the micrococcus of cerebro-spinal meningitis, and it is interesting to note that in certain of the Fincham cases the micrococcus catarrhalis was present in nasal swabs and that in one instance this micrococcus was recovered from the cerebro-spinal fluid after death. The presence of the micrococcus catarrhalis, however, was established in certain cases where the enteric fever was of ordinary type as well as in others in which cerebro-spinal symptoms were strongly marked.

On the Sanitary Circumstances and Administration of the Borough of Haverfordwest and upon Recent Prevalence of Enteric Fever therein, by Mr. G. C. HANCOCK [3]—This report gives an interesting account of a detailed inquiry into the causes of a small epidemic of enteric fever in the borough of Haverfordwest, in Pembrokeshire (population 6000) 38 cases of this disease, of which 19 were children under 10 years of age, occurred between November, 1905, and February, 1906. A few single cases had been reported in the town during the previous summer and autumn. After reviewing the distribution of cases, milk-supplies, water-supplies, opportunities of personal infection, and like matters, Mr. Hancock found that it was impossible definitely to attribute the outbreak to any one cause. The total of cases was too small, in fact, to permit of differential observations in regard to a variety of conditions any one of which might have been concerned in producing an epidemic of enteric fever. Nearly all the cases occurred in households supplied by one out of the three separate water services of Haverfordwest. This supply, from a well at Crowhill, is the most important of the three, and serves about two-thirds of the town. The Crowhill supply cannot be regarded as free from opportunity of dangerous pollution. Such opportunities exist at the well itself and also in connexion with the distributing system. Haverfordwest has the dangerous combination of ball hydrants with an intermittent supply which is well known to permit insuction of polluting matters into the mains. The milk-supply also came under suspicion. A single farm, obtaining water from a polluted shallow well, supplied the milk used in seven of the invaded dwellings, in which 20 cases of enteric fever occurred. The total number of households supplied with milk from this farm was only 70, so that the incidence on the consumers of the milk was quite exceptional. Cases of enteric fever occurred at the farm during November and December. In other instances various opportunities were afforded of personal and local infection on account of absence of means of isolation and prevalent insanitary conditions. Among the latter Mr. Hancock draws attention to the numerous "hand-flushed" water-closets, objectionable privy middens, and faulty system of refuse removal. A series of practical recommendations to the town council as to improvements in the sanitary state of the borough is appended to the report.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH.

County Borough of Newport (Mon.).—Dr. J. Howard-Jones is apparently somewhat anxious with reference to the water-supply of this district and sources of probable pollution were discovered on certain of the gathering grounds during 1905; so real do these dangers appear to have been that the corporation bought considerable areas of ground with a view to diminish the risk. Dr. Howard-Jones is clearly of opinion that an efficient scheme of filtration ought to be introduced and the corporation will do well, before rejecting his advice, to pass over in its mind certain recent events which have occurred in South Wales illustrating the importance of the thorough filtration of drinking water. During the spring months, from April to June, the water in the reservoirs has not infrequently been complained of owing to an "objectionable fishy smell," such smell being most apparent in the mains which have a sluggish flow, and efforts have been recently made to destroy the "algæ" which are believed to give rise to the smell by treating the water with copper sulphate, a process which is said to have been followed by good results in America. In order to produce a solution of this salt of 1 in 1,000,000, ten pounds of the sulphate were required for every 1,000,000 gallons of water. The sulphate was divided into 28 pound bags, 28 of which were tied to a large raft 30 feet wide, which was towed over the surface of the reservoir. After treatment in this fashion a small white flocculent coagulum consisting of vegetable albumin coagulated by the cupric sulphate solution was observed and this gradually sank. The water rapidly cleared and after frequent testing was, at the end of a week, again delivered to the public free from any appreciable traces of copper. Other reservoirs were treated in somewhat the same fashion and satisfactory results were obtained. These facts may be of interest to other medical officers of health who have similar trouble with the water-supply of their district.

County Borough of Salford.—Mr. C. H. Tattersall followed during 1905 the practice which has already been adopted in certain circumstances at other places of discharging scarlet fever convalescents while still desquamating, the patients having been discharged at the end of four weeks or as soon afterwards as their general condition rendered it permissible. But patients with otorrhœa or rhinorrhœa were retained until they were "convalescent." Of the 677 scarlet fever patients discharged during 1905, as many as 418 were still desquamating. In relation to the discharge of these 418 cases there were 29 so-called "return" cases, or 6·9 per cent., whereas in connexion with the remaining 259 who were only liberated when their desquamation was completed there were 32 cases, or an incidence of 12·4 per cent. of "return" cases. As Mr. Tattersall observes, these figures for "return" cases are very high, but he points out the very necessary fact for a due comprehension of the figures that he has included under the term "return" cases those which occurred so long as seven weeks after the return of the first case. Limiting the figures to those cases which occurred within three weeks of the home-coming of the primary case the incidence in connexion with the desquamating cases was 7 per cent. and with the desquamated cases 10 per cent. Mr. Tattersall apparently infers from these figures that "it is again proved that we are quite correct in neglecting entirely the presence or absence of desquamation as an indication of the presence or absence of infection. This is further confirmed by the fact that, although so many cases were discharged desquamating, there is a slight reduction in the percentage of cases." He adds that all the "return" cases were carefully inquired into and the primary cases examined, with the result that in 18 per cent. of such primary cases nasal discharge and in 8·2 per cent. ear discharge was present. In the remaining 73·8 per cent. no explanation to account for the "return" cases could be discovered. These results appear to be materially different from those which occurred in connexion with desquamating cases of scarlet fever discharged from the Leicester and Southampton isolation hospitals and it might be instructive to make an investigation of the whole group.

City of Bristol.—The corporation of this city has made, with the consent of the Local Government Board, a capital contribution of £5000 to the Winsley Sanatorium for Consumption, for which sum it has purchased a capital share in the institution to the extent of 20 beds at a cost of £250 per bed, the annual contribution for maintenance of patients amounting to £65 per bed. During 1905 there were 171 applications for the corporation beds and of this number 65 were "selected" and "admitted." Of these, 45 were discharged, their state on discharge being as follows: much improved, 28; little improved, 11; and not improved, six. It is to be hoped that Dr. D. S. Davies, the medical officer of health of Bristol, will year by year record the after-history of the Bristol patients discharged from the sanatorium and in such fashion as to indicate the money value of the work which each patient is year by year performing. Independent testimony of this nature is much to be desired in order that records having some scientific value may be collected. Dr. Davies furnishes an instructive table showing the hospital accommodation for cases of infectious diseases provided by certain large towns and as the data are valuable for reference this table is reproduced:—

—	Population, 1903.	No. of City hospital beds.
Liverpool	716,810	925*
Manchester	553,486	560
Birmingham	533,039	809
Leeds	443,559	540
Sheffield	425,528	424
Bristol	338,895	190

* Shortly to be increased to 1200.

[3] Ibid., No. 239, price 6d.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 7809 births and 5192 deaths were registered during the week ending Oct. 6th. The annual rate of mortality in these towns, which had declined in the four preceding weeks from 22·3 to 17·4 per 1000, further declined last week to 17·1. During the 13 weeks of last quarter the death-rate in these towns averaged 16·2 per 1000; the rate during the same period in London did not exceed 15·4. The lowest death-rates in the 76 towns during the week under notice were 5·4 in Hornsey, 7·9 in Reading, 9·3 in King's Norton, and 10·0 in Croydon; the rates in the other towns ranged upwards to 25·0 in Tynemouth, 25·6 in Wigan, 27·1 in Merthyr Tydfil, and 30·4 in Stockport. The 5192 deaths in the 76 towns showed a further decline of 98 from the high numbers returned in recent weeks, and included 1027 which were referred to the principal epidemic diseases, against numbers declining from 2570 to 1354 in the four previous weeks; of these, so many as 775 resulted from diarrhœa, while 63 were referred to "fever" (principally enteric), 61 to diphtheria, 49 to measles, 43 to whooping-cough, 36 to scarlet fever, and not one to small-pox. The deaths from these epidemic diseases were equal to a mean annual rate of 3·4 per 1000 in the 76 towns, while the rate in London did not exceed 2·9. These epidemic diseases caused no death last week in Hastings, and the annual death-rate therefrom was less than 1 per 1000 in West Bromwich and in Smithwick, while it ranged upwards in the other towns to 8·5 in West Hartlepool, 9·7 in Wallasey, and 9·8 in Warrington. The deaths referred to diarrhœa (mainly of infants under one year of age), which had declined from 2342 to 1137 in the four preceding weeks, further fell last week to 775; the highest annual rates from this disease during the week were 6·1 in Bolton and in Burnley, 6·7 in Preston, 7·1 in West Hartlepool, 8·7 in Wallasey, and 9·8 in Warrington. The 63 deaths referred to "fever" showed a further increase, and considerably exceeded the number returned in any previous week of this year; they included 12 in London, six in Liverpool, four in Sheffield, and three each in West Ham, Bristol, Nottingham, Birkenhead, Bradford, Leeds, and Hull. Diphtheria showed the largest proportional fatality in Halifax and Walthamstow; measles in Newcastle-on-Tyne, Oldham, and Norwich; and whooping-cough in Swansea. No case of small-pox was under treatment in the Metropolitan Asylums hospitals during the week, no case of this disease having been admitted thereto since the end of June. The number of scarlet fever cases under treatment in the Metropolitan Asylums hospitals and in the London Fever Hospital, which had increased in the five preceding weeks from 3042 to 3388, further rose to 3603 during the week under notice; 621 new cases were admitted to these hospitals during the week, against 440, 473, and 533 in the three previous weeks. The deaths in London referred to pneumonia and other diseases of the respiratory organs, which had been 149 and 133 in the two previous weeks, rose again last week to 188, and exceeded by 27 the corrected average in the corresponding week of the four preceding years, 1902–05. The causes of 42, or 0·8 per cent., of the deaths registered in the 76 towns during the week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified last week in Leeds, Bristol, West Ham, Newcastle-on-Tyne, and in 47 other large towns; the proportion of uncertified deaths showed, however, a considerable excess in Birmingham, Liverpool, Sheffield, Bradford, and in several other smaller towns.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been equal to 16·1 per 1000 in each of the two preceding weeks, rose to 17·2 in the week ending Oct. 6th and exceeded by 0·1 the mean rate during the same week in the 76 English towns. The rates in the eight Scotch towns last week ranged from 13·6 and 13·9 in Perth and Leith to 18·4 in Glasgow and 20·6 in Dundee. The 588 deaths in the eight towns showed an increase of 36 upon the number returned in each of the two preceding weeks, and included 77 which were referred to the principal epidemic diseases, against 136, 122, and 104 in the three previous weeks. These 77 deaths were equal to an annual rate of 2·2 per 1000, which was 1·2 below the rate from the same diseases in the 76 English towns. Of these 77 deaths, 49 resulted from diarrhœa, 11 from "fever," nine from whooping-cough, four each from measles and scarlet fever, and not one either from small-pox or measles. The deaths referred to diarrhœa in the Scotch towns further declined to 49, from 104, 87, and 82 in the three previous weeks, but exceeded the number in the corresponding week of last year by 12; they included 26 in Glasgow, nine in Dundee, and four each in Edinburgh and Leith. Seven of the nine fatal cases of whooping cough occurred in Glasgow, as did eight of the 11 deaths referred to "fever," of which four were certified as cerebro-spinal meningitis. Of the four deaths from diphtheria three were returned in Glasgow and one in Edinburgh; while scarlet fever caused two deaths in Dundee and one each in Edinburgh and Aberdeen. The deaths in the eight towns referred to diseases of the respiratory organs, including pneumonia, which had been 66 in each of the two preceding weeks, were 72 last week, and exceeded by seven the number returned in the corresponding week of last year. The causes of 20, or 3·4 per cent., of the deaths registered during the week were not certified; the mean proportion of uncertified deaths in the 76 English towns during the same week did not exceed 0·8 per cent.

HEALTH OF DUBLIN.

The annual death-rate in Dublin, which had been equal to 29·4, 26·8, and 24·5 per 1000 in the three preceding weeks, rose again to 26·0 in the week ending Oct. 6th. During the 13 weeks of last quarter the death-rate in the city averaged 21·4 per 1000, the mean rate during the same period being only 15·4 in London and 13·1 in Edinburgh. The 189 deaths of Dublin residents during the week under notice showed an increase of 11 upon the number in the previous week, and included 32 which were referred to the principal epidemic diseases, against numbers declining from 52 to 37 in the four preceding weeks; these 32 deaths were equal to an annual rate of 4·4 per 1000, the death-rate during the week from the same diseases being only 2·1 in London and 0·9 in Edinburgh. Of these 32 epidemic deaths in Dublin no fewer than 31 resulted from diarrhœa, corresponding with the number in the previous week, the other of these deaths being a fatal case of whooping-cough. No death in Dublin was referred last week to "fever," diphtheria, scarlet fever, measles, or small-pox. The deaths both of infants and of elderly persons again showed a considerable excess. Three inquest cases and four deaths from violence were registered; and 69, or 36·5 per cent., of the deaths occurred in public institutions. The causes of four, or 2·1 per cent., of the deaths registered during the week were not certified.

VITAL STATISTICS OF LONDON DURING SEPTEMBER, 1906.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 9·0 per 1000 of the population, estimated at 4,721,217 persons in the middle of the year. In the three preceding months the rates had been 7·6, 7·7, and 6·8 per 1000 respectively. The lowest rates last month were recorded in Kensington, Chelsea, the City of Westminster, Stoke Newington, and Holborn; and the highest rates in Paddington, Bethnal Green, Southwark, Bermondsey, Battersea, and Deptford. The prevalence of scarlet fever showed a marked increase over that recorded in the preceding months; this disease was proportionally most prevalent in Paddington, Shoreditch, Bethnal Green, Southwark, Bermondsey, Deptford, and Greenwich. The Metropolitan Asylums hospitals contained 3360 scarlet fever patients at the end of last month, against 2705, 2998, and 3012 at the end of the three preceding months; the weekly admissions averaged 461, against 354, 395, and 338 in the three preceding months. Diphtheria was also considerably more prevalent than it had been in August; the greatest proportional

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING SEPTEMBER, 1906.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1906.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	**721,217**	—		**621**	—	**194**	—	**15**	**459**	**1**	**3254**	**9·0**	—	**33**	**27**	**53**	**68**	—	**27**	—	**1562**	**1710**	**4·7**	**6205**	**17·1**	**249**
West Districts.																									
Paddington	148,913	—	96		—	4	—	—	11	—	139	12·2	—	—	—	3	1	—	1	—	43	48	4·2	157	13·7	248
Kensington	180,952	—	42	8	—	2	—	1	14	—	67	4·8	—	4	1	1	1	—	—	—	46	53	3·8	190	13·7	259
Hammersmith	120,679	—	30	19	—	1	—	2	6	—	58	6·3	—	—	—	4	1	—	—	—	46	51	5·6	178	19·2	329
Fulham	161,965	—	63	11	—	2	—	—	14	—	90	7·2	—	1	2	2	6	—	2	—	97	110	8·9	236	19·0	332
Chelsea	74,672	—	26	2	—	—	—	—	4	—	32	5·6	—	1	—	—	2	—	—	—	25	28	4·9	87	15·2	254
City of Westminster	173,906	—	33	13	—	7	—	—	3	—	56	4·2	—	1	—	2	—	—	—	—	20	23	1·7	162	12·1	186
North Districts.																									
St. Marylebone	128,580	—	1	10	—	6	—	—	13	1	61	6·2	—	4	—	1	1	—	—	—	20	26	2·6	141	14·3	106
Hampstead	89,633	—	27	7	—	4	—	—	4	—	42	6·1	—	—	1	—	—	—	1	—	13	15	2·2	64	9·3	169
St. Pancras	236,455	—	81	17	—	11	—	—	14	—	123	6·8	—	—	1	3	—	—	—	—	49	53	2·9	283	15·6	204
Islington	344,987	—	133	43	—	30	—	—	26	—	232	8·8	—	—	6	1	6	—	4	—	89	106	4·0	446	16·9	275
Stoke Newington	53,217	—	10	5	—	1	—	—	3	—	19	4·7	—	—	—	—	—	—	—	—	13	13	3·2	41	10·0	214
Hackney	230,721	—	105	28	—	9	—	1	25	—	168	9·5	—	—	1	3	6	—	—	—	70	80	4·5	277	15·7	194
Central Districts.																									
Holborn	55,805	—	6	9	—	2	—	—	4	—	21	4·9	—	—	—	—	1	—	—	—	6	7	1·6	82	19·2	115
Finsbury	97,466	—	5	22	—	1	—	1	12	—	81	10·8	—	—	1	—	3	—	—	—	40	44	5·9	158	21·1	264
City of London	21,367	—	9	1	—	3	—	—	2	—	15	9·2	—	—	1	1	—	—	—	—	3	5	3·1	31	18·9	106
East Districts.																									
Shoreditch	116,108	—	64	7	—	5	—	2	22	—	100	11·2	—	—	2	1	1	—	1	—	66	71	8·0	212	23·8	367
Bethnal Green	130,609	—	72	24	—	10	—	2	24	—	132	13·2	—	1	2	—	2	—	2	—	44	51	5·1	218	21·6	274
Stepney	307,176	—	141	58	—	15	—	—	48	—	262	11·1	—	6	1	2	3	—	3	—	143	158	6·7	512	21·7	261
Poplar	170,673	—	54	22	—	9	—	—	21	—	106	8·1	—	10	—	2	2	—	2	—	65	81	6·2	251	19·2	228
South Districts.																									
Southwark	209,143	—	209	44	—	22	—	—	43	—	318	19·9	—	—	3	3	6	—	3	—	79	94	5·9	340	21·2	271
Bermondsey	128,629	—	97	18	—	8	—	—	19	—	142	14·4	—	2	1	2	1	—	1	—	54	61	6·2	212	21·5	274
Lambeth	315,774	—	83	34	—	4	—	—	30	—	151	6·2	—	1	2	7	3	—	2	—	89	104	4·3	426	17·6	221
Battersea	179,622	—	123	27	—	11	—	1	16	—	178	12·9	—	—	—	2	8	—	—	—	50	60	4·4	222	16·1	227
Wandsworth	273,381	—	75	36	—	6	—	2	14	—	133	6·3	—	—	1	2	3	—	1	—	82	89	4·2	345	16·5	278
Camberwell	274,132	—	105	26	—	3	—	1	32	—	167	7·9	—	1	—	3	5	—	2	—	103	114	5·4	361	17·2	285
Deptford	115,495	—	61	42	—	6	—	—	14	—	123	13·9	—	1	—	3	2	—	2	—	43	51	5·8	170	19·2	272
Greenwich	105,350	—	62	21	—	4	—	—	7	—	94	11·6	—	—	1	3	—	—	—	—	23	27	3·3	107	13·2	155
Lewisham	148,463	—	50	19	—	4	—	—	11	—	84	7·4	—	—	—	1	2	—	—	—	38	41	3·6	159	14·0	226
Woolwich	127,345	—	31	20	—	3	—	2	3	—	59	6·0	—	—	—	1	2	—	—	—	43	46	4·7	137	14·0	209
Port of London	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

prevalence of this disease was recorded in Paddington, Finsbury, Bethnal Green, Stepney, Southwark, and Deptford. The number of diphtheria patients under treatment in the Metropolitan Asylums hospitals, which had been 782, 878, and 834 at the end of the three preceding months, had risen again to 844 at the end of last month; the weekly admissions averaged 130, against 114, 135, and 111 in the three preceding months. Enteric fever continued to show an increasing prevalence last month; among the various boroughs this disease was proportionally most prevalent in Islington, the City of London, Bethnal Green, Southwark, Bermondsey, and Battersea. There were 139 enteric fever patients under treatment in the Metropolitan Asylums hospitals at the end of last month, against 93, 99, and 103 at the end of the three preceding months; the weekly admissions averaged 28, against 20, 15, and 16 in the three preceding months. Erysipelas was proportionally most prevalent in Finsbury, Shoreditch, Bethnal Green, Stepney, Poplar, Southwark, Bermondsey, and Deptford. The 15 cases of puerperal fever included two belonging to Hammersmith, two to Shoreditch, two to Bethnal Green, two to Wandsworth, and two to Woolwich.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various boroughs, the deaths occurring in public institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the four weeks ending Sept. 29th the deaths of 6205 persons belonging to London were registered, equal to an annual rate of 17·1 per 1000 of the population; in the three preceding months the rates had been 11·9, 11·3, and 15·8 per 1000. The death-rates last month ranged from 9·3 in Hampstead, 10·0 in Stoke Newington, 12·1 in the City of Westminster, 13·2 in Greenwich, and 13·7 in Paddington and Kensington, to 21·1 in Finsbury, 21·2 in Southwark, 21·5 in Bermondsey, 21·7 in Stepney, 21·8 in Bethnal Green, and 23·8 in Shoreditch. The 6205 deaths from all causes in London last month included 1710 which were referred to the principal infectious diseases; of these, 33 resulted from measles, 27 from scarlet fever, 53 from diphtheria, 68 from whooping-cough, 27 from enteric fever, and 1502 from diarrhœa. Among the metropolitan boroughs these diseases caused the lowest death-rates in the City of Westminster, St. Marylebone, Hampstead, St. Pancras, Stoke Newington, and Holborn; and the highest rates in Fulham, Finsbury, Shoreditch, Stepney, Poplar, Southwark, and Bermondsey. The 33 deaths from measles were 16 below the corrected average number in the corresponding periods of the four preceding years; this disease was proportionally most fatal in Kensington, St. Marylebone, Stepney, Poplar, and Bermondsey. The 27 fatal cases of scarlet fever showed a decline of seven from the corrected average number; among the various metropolitan boroughs the greatest proportional mortality from this disease was recorded in Fulham, Islington, the City of London, Shoreditch, Bethnal Green, and Southwark. The 53 deaths from diphtheria were equal to the average number in the corresponding weeks of the four preceding years; diphtheria was proportionally most fatal in Paddington, Hammersmith, the City of London, Lambeth, Deptford, and Greenwich. The 68 fatal cases of whooping-cough were slightly below the corrected average; among the various metropolitan boroughs the highest death-rates from this disease were recorded in Fulham, Chelsea, Hackney, Finsbury, Southwark, and Battersea. The 27 deaths from enteric fever were 17 fewer than the average for the corresponding periods of the four preceding years; the greater proportional mortality from this disease occurred in Fulham, Islington, Bethnal Green, Poplar, Southwark, and Deptford. The 1502 fatal cases of diarrhœa were 805 in excess of the average; among the various metropolitan boroughs this disease was proportionally most fatal in Hammersmith, Fulham, Finsbury, Shoreditch, Stepney, and Bermondsey. In conclusion, it may be stated that, owing to the excessive fatality of diarrhœa, the aggregate mortality from these principal infectious diseases in London last month was as much as 77 per cent. above the average.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 249 per 1000. The lowest rates of infant mortality were recorded in the City of Westminster, St. Marylebone, Hackney, Holborn, the City of London, and Greenwich; and the highest rates in Hammersmith, Fulham, Islington, Shoreditch, Poplar, Wandsworth, and Camberwell.

* Including membranous croup.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon P. E. Maitland, lent for three months' study at West London Hospital. Staff Surgeons: H. W. B. Shewell to Bermuda Hospital; E. S. Reid to the *Egmont*, for the *Maine;* H. Huskinson to the *Calypso;* G. Gibson to the *Vivid*, for Pembroke Dockyard; and P. W. MacVean to the *Topaze*. Surgeons: W. W. Keir to R.M.L.I. Division, Portsmouth; R. R. Horley to the *Vernon*, for the *Furious;* C. R. Nicholson to the *Egmont;* E. D. Rutherford to the *Duncan;* and T. D. Liddle to the *Sapphire*, for the *Sapphire II.* Civil Practitioner M. McDonough to be Surgeon and Agent at Castello Bay.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel J. V. Salvage, Tidworth, is appointed Sanitary Officer, Eastern Command. Lieutenant-Colonel E. L. Maunsell has left the Southern Command for South Africa. Major M. P. C. Holt, D.S.O., at Woolwich, is appointed Assessor for Junior Examinations in Military Surgery. Lieutenant R. J. C. Thompson is ordered for duty in South Africa. Lieutenant-Colonel James Maconachie, Edinburgh, from temporary half-pay, retires on retired pay (dated Oct. 10th, 1906).

INDIAN MEDICAL SERVICE.

The King has approved of the following admissions to the Indian Medical Service:—To be Lieutenants (dated Feb. 1st, 1906): Harry William Pierpoint, Khandu Ganpatrao Gharpurey, William David Henderson Stevenson, Henry Patullo Cook, Percy Strickland Mills, William James Fraser, Desmond Charles Villiers FitzGerald, Charles Richard O'Brien, Robert Siggins Kennedy, Bernard Higham, Charles Aubrey Godson, Reginald Henry Lee, Norman Halliburton Hume, Greer Edmund Malcomson, Patrick Heffernan, William Anderson Mearns, Henry Stewart Hutchison, Duncan Macdonald Cochrane Church, Robert George Gibbon Croly, Stanley Trefusis Crump, William Barbour Alexander Kennedy Cullen, and James MacGregor Skinner.

His Majesty has also approved the transfer to the temporary Half-pay List of the undermentioned officer:—Captain Laurence Rundall (dated Sept. 17th, 1906).

IMPERIAL YEOMANRY.

Yorkshire Hussars (Alexandra, Princess of Wales's Own): Surgeon-Lieutenant W. H. Cheetham to be Surgeon-Captain (dated Oct. 6th, 1906).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Newcastle-on-Tyne: Frank Hawthorn to be Surgeon-Lieutenant (dated Oct. 6th, 1906).

Rifle: 1st Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment): Surgeon-Major F. Shann to be Surgeon-Lieutenant-Colonel (dated Oct. 6th, 1906). 1st Volunteer Battalion the Prince Albert's (Somersetshire Light Infantry): Surgeon-Major J. M. Harper is borne as Supernumerary whilst holding the appointment of Brigade-Surgeon-Lieutenant-Colonel, Senior Medical Officer, Cornwall and Somerset Volunteer Infantry Brigade (dated Oct. 10th, 1906). 1st Lanarkshire Volunteer Rifle Corps: Arthur Innes to be Surgeon Lieutenant (dated Oct. 10th, 1906).

THE LATE BRIGADE-SURGEON-LIEUTENANT-COLONEL A. CROMBIE, C.B., M.D., I.M.S. (RETIRED).

The announcement of the death of this well-known officer, which occurred on Sept. 29th, was the occasion of much sorrow and regret among his wide circle of friends and acquaintances, professional and otherwise. We have in another column given an account of Dr. Crombie's life and work and in this place have only to state very briefly the facts and dates connected with his official record of services. He was the youngest son of David Guillan Crombie, of Kilminning, Fifeshire, and entered the service as an assistant surgeon in March, 1872, being promoted surgeon in July, 1873, surgeon-major in March, 1884, surgeon-lieutenant-colonel in March, 1892, brigade-surgeon-lieutenant-colonel in August, 1896, retiring in 1899. He was employed for some years at the India Office and represented it during the South African war at the Medical Department, War Office, where much hard and responsible work was done for a

long period. For his services he was awarded a C.B. Apart from his professional attainments, which were of a high order, his long and distinguished services and traits of character gained him the esteem and respect of all with whom he had to do.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The winter classes commenced on Oct. 3rd at the Artists Rifle Volunteers headquarters, Hyde Park-square, W. Congratulations are due to Surgeon-Colonel P. B. Giles, senior medical officer, on account of the excellent muster of all ranks present, especially when it is remembered that most metropolitan corps have considerably fallen off in numbers. One class consists of non-commissioned officers and men who are being instructed in first-aid; the other is an advanced class and the subjects taught are hospital duties, ambulance drill, and the sanitation of camps. The work will conclude with the official inspection in December. The officers selected to take part in the instruction are: Surgeon-Lieutenant-Colonel W. Culver James, Surgeon-Lieutenant-Colonel R. R. Sleman, Surgeon-Major E. M. Callender, Surgeon-Major C. S. de Segundo, Captain (R.A.M.C. Vol.) E. W. St. Vincent Ryan, Surgeon-Captain J. H. Dauber, Surgeon-Captain A. Ducat, Surgeon-Captain J. Masters, Surgeon-Lieutenant C. A. Lees, and Surgeon-Lieutenant P. Bott.

ROYAL NAVY MEDICAL DEPARTMENT ENTRANCE EXAMINATION.

An examination of candidates for entry into the Medical Department of the Royal Navy will be held in November next at Examination Hall, Thames Embankment. Not more than ten commissions will be offered. The forms to be filled up by candidates will be supplied on application to the Director-General of the Royal Navy Medical Service, Admiralty, 18, Victoria-street, S.W.

NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the directors of the Naval Medical Supplemental Fund held on Oct. 9th Inspector-General W. H. Lloyd, R.N., in the chair, the sum of £75 was distributed among the several applicants.

Major F. H. Thompson, officer commanding Welsh Border Bearer Company, R.A.M.C. (Vol.), has been appointed Medical Officer in charge of troops (4th Battalion Shropshire Light Infantry Militia) at Hereford, vice Colonel R. Thomason, deceased.

Revised regulations for the Army Medical Services, which have been approved, will shortly be issued.

Correspondence.

"Audi alteram partem."

OPERATIVE TREATMENT IN INSANITY.

To the Editors of THE LANCET.

SIRS,—My thanks are due to Dr. T. Claye Shaw for his prompt and courteous answer to my letter of Sept. 16th, but he has overlooked some of the questions that I put therein. I still do not understand what information bearing on the prognosis of a case of ordinary insanity, not due to gross intracranial disease, is to be obtained from what can be seen of the brain and its membranes through a trephine hole. The improvement of prognosis was one of the advantages promised by Dr. Claye Shaw from cerebral surgery.

I well remember the occasion on which Dr. Claye Shaw brought the subject before the section of the British Medical Association at Bournemouth and proposed that the mental condition of a general paralytic could be improved by making a hole in his skull. Dr. Claye Shaw may, perhaps, remember that I suggested he might as well try to lower the ritual of a church by taking some of the slates off the roof. My recollection is that his advocacy of trephining was limited to cases of general paralysis, while my questions have regard to cases of ordinary insanity, not due to gross intracranial disease. As I understand Dr. Claye Shaw's position, it is putting it at the very highest, that in some cases of general paralysis there is intracranial pressure due to effusion into the arachnoid; that this fluid can be evacuated and the pressure relieved by trephining; that the same results can be obtained by lumbar puncture; and that lumbar puncture is to be preferred. So far I see no argument in favour of cerebral surgery, whether for prognostic or for therapeutic purposes, in ordinary insanity not due to gross intracranial disease.

But Dr. Claye Shaw goes further. He says there are cases in which there is reason to believe that delusions are the result of hallucinations; that the hallucinations arise from disease or derangement of the sensory centres; and that these centres can be exposed and remedies applied locally by operative measures. The proposal appears to me to rest upon so frail a chain of assumption as deprives it of all justification. Cases in which delusions follow hallucination are rare; and cases in which it can be plausibly advanced that delusions result from hallucination must be extremely rare. But supposing it is satisfactorily determined in any case that delusion has resulted from hallucination I know of no case verified post mortem in which the character of a hallucination has enabled a localising diagnosis to be made. Supposing, however, that this were done and the area of convolutions, to the disorder of which the hallucination is due, to be certainly determined, it is to be remembered that if, as Dr. Claye Shaw suggests, this area is one of sensory centres, it is much less accessible to operative exposure than the motor area hitherto mostly operated on. In some cases it could not be exposed without an operation from which the most audacious surgeon would shrink. Supposing all these difficulties surmounted; supposing it is ascertained beyond question that the hallucination preceded the delusion; that it not only preceded, but was the cause of, the delusion; supposing the area of convolutions, to the derangement of which the hallucination is due, to be localised and correctly diagnosed; supposing the operation to be practicable and to be successfully performed; supposing the peccant convolution to be laid bare; supposing all these improbabilities realised and all these difficulties surmounted, what then? What are we to do to that convolution, to drive, let us say, the hallucination out of it? We must be guided, I suppose Dr. Claye Shaw would say, by what we find. We are still, therefore, in a region of uncertainty; and suppose we find nothing? What then? Sirs, I cannot think it justifiable to subject a patient, on the strength of such a chain of improbable contingencies, to an operation which, if it does not risk his life, does cost him a lot of money, as Dr. Claye Shaw very properly points out.

I do not deny that there are rare cases in which there is grave suspicion that gross brain disease accompanies mental disorder that may justifiably be submitted to operation if localising and other symptoms are propitious, but I strongly protest against giving surgeons a roving commission to trephine insane persons on the ground that abdominal surgery has been very successful.

I am, Sirs, yours faithfully,

Wimpole-street, W., Oct. 6th, 1906. CHAS. MERCIER.

ANTIVACCINATION TACTICS.

To the Editors of THE LANCET.

SIRS,—Through the courtesy of Mr. W. J. Furnival, of Stone, Staffs, England, we have recently received two small *brochures* devoted to a review of the so-called medical literature adverse to vaccination. The volume, entitled "Professional Opinion Adverse to Vaccination, American, Colonial, and Continental," opens with an abstract of a paper by our health officer, Dr. Martin Friedrich, from the *Cleveland Medical Journal*, and a second abstract from a paper by the same author accredited to a monograph published by the Physical Culture Company, of Spotswood, New Jersey, although it originally appeared in the *Cleveland Medical Journal*. It seems to us wise, both in behalf of Dr. Friedrich and in the interest of the Cleveland profession, to make the true facts in the matter known through your journal. The articles referred to in this *brochure* appeared in the *Cleveland Medical Journal* during the year 1902, the responsibility for their publication being assumed at that time by the then editor in chief. In May of this year we received a request from Mr. W. J. Furnival for permission to republish in pamphlet form one of these articles referred to above. In reply to this request we wrote under date of May 18th as follows:

Wm. J. Furnival, Esq.,
16, Granville-terrace, Stone, Staffs, England.

DEAR SIR,—With respect to your request to republish in pamphlet form an article which appeared in the *Cleveland Medical Journal* by Dr. Friedrich we thought it best to ask the author whether he wished

such republication. He said very positively that he did not. In so far, however, as we are concerned, we are perfectly willing that you should reprint this article, provided only you publish in an equally conspicuous place, the following statement. As shown by the records of the Health Office of Cleveland, Ohio, Dr. Martin Friedrich was appointed health officer during a waning epidemic of small-pox. He at once, and very properly, began to clean up the infected districts. The last cases soon disappeared, but previous to his campaign their numbers were becoming fewer and fewer. In a very short time the disease was again introduced into Cleveland from without. In spite of the previous disinfections and their rigorous continuance in the new epidemic, the number of cases increased month by month. At first, during the spring and summer with increasing numbers of cases, general vaccination was not introduced on account of Dr. Friedrich's unwillingness to use an unsatisfactory vaccine. Finally, however, a satisfactory virus was secured and general vaccination was begun. The workmen in numerous shops, children about to re-enter school for the fall term, and all persons who came in contact with small-pox were vaccinated as rapidly as possible. Within two months after the beginning of general vaccination an epidemic which had promised by its constantly increasing numbers of cases to be very serious indeed began to decline, and once on the decline dropped off with great rapidity. You will please note that in the above statement there can be found scarcely a single statement of opinion, simply cold, hard facts. We presume that these facts are the reason why Dr. Friedrich declines to have his paper republished, though he does not say so. We, therefore, can only grant permission for the republication of the article, if you agree also to publish the above statement, and thank you very much for not having published it without permission. Sincerely yours,

(Signed) THE CLEVELAND MEDICAL JOURNAL.

In this letter permission was given to make use of Dr. Friedrich's article provided only the statement contained in the last half of our letter be published in an equally conspicuous space. In the *brochure* before us the first six and one-half pages have been abstracted from Dr. Friedrich's article and no allusion has been made in this place to our letter quoted above. Not until we reach p. 175 of the *brochure* do we find our statement of the facts and in this way the compiler has violated the conditions under which permission for republication was granted.

It is deeply to be regretted that the *Cleveland Medical Journal* should have been in the smallest degree available as a source of material for the propaganda of the antivaccinationists. We are delighted to be able to report that during the last four years, under the efficient management of Dr. Friedrich, our health officer, aided by a corps of district physicians, vaccination has been carried out in a most thorough manner with the happy result that Cleveland has been during this time practically free from small-pox. At the present time it is the rule of our health office that no child shall be allowed to return to the public schools without having been first properly vaccinated. Trusting that you will be able to give this communication the prominence which it seems to us to deserve,

We remain, yours very truly,

THE CLEVELAND MEDICAL JOURNAL,
EDWARD PERKINS CARTER, Editor.

Cleveland, U.S.A., Sept. 26th, 1906.

PURIN-FREE DIETS.

To the Editors of THE LANCET.

SIRS,—In his interesting article on the above subject in THE LANCET of Oct. 6th Dr. W. A. Potts says: "The condition of 'hyperpyræmia,' due to an excess of carbohydrates, recently described as the underlying element in many disorders, is not developed on a properly arranged fruitarian diet; all excesses are bad and too much starchy (carbohydrate?) food in conjunction with meat is especially bad." I fully agree with the whole of this statement. Indeed, I would go further and admit that a properly arranged fruitarian diet is in many cases capable of dispersing the condition of hyperpyræmia and the numerous disorders—migraine, asthma, and other recurrent affections less well defined—which I have claimed are very commonly dependent thereon. In treatment by such a diet the hyperpyræmia is dispersed by means of the necessary reduction in the proteid intake.

But why cease from clinical experiment at this stage of the argument? Why not take a series of similar cases and try the effect of striking out the other factor in the injurious food combination—namely, the carbohydrate excess? The experiment is simple, harmless, and, *when restricted to patients who are more or less corpulent*, almost always successful. All that is needful is to cut off sugar, including articles of food containing sugar, and reduce the remainder of the purely carbonaceous intake—fats and starches, especially the latter—to the level at which the patient is slowly losing weight. Even a less severe reduction is often sufficient. When this is done, many recurrent affections, such as bilious attacks, sick headaches, asthma, and even some cases of angina pectoris, cease at once; and many chronic affections, such as persistent bronchial catarrh and the so-called gouty eczema and pruritus, steadily improve and disappear in the course of a very few weeks.

But if this is true—and the statement may be readily verified by every practitioner of medicine—what becomes of the contention that the purin intake is an essential factor in any of the affections mentioned? Meat, both red and white, of necessity enters largely into the dietary of such patients and tea, coffee, meat extracts, and other purin foods may be given freely without danger of inducing relapse, so long as the purely carbonaceous intake is adequately restricted. On the other hand, as Dr. Potts himself has stated, "the mere fact that a diet is purin-free is of little value."

I am, Sirs, yours faithfully,

Upper Norwood, S.E. FRANCIS HARE.

CERTAIN ANALOGIES BETWEEN INFLUENZA AND PULMONARY TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—I would be much obliged by your publishing the following note. In THE LANCET of Sept. 15th I have noticed a misprint which makes the paragraph in which it occurs somewhat difficult to understand. I refer to your account of the paper that I read in the Section of State Medicine at the Toronto meeting of the British Medical Association. The fourth general analogy between tuberculosis and influenza that I undertook to discuss was described in the abstract of the paper which it is usual to furnish beforehand in the following words: Both distinctly affect the functions of relation (*a*) by exciting rheumatic symptoms—*infectious rheumatism* in the one case, *rhumatisme tuberculeux* (Poncet) in the other; and (*b*) by giving rise to *meningeal and other nervous complications*.

The misprint to which I refer, it will be seen, makes this meaning obscure. I am, Sirs, yours faithfully,

Nice, Oct. 5th, 1906. A. W. GILCHRIST, M.D. Paris.

PRESCRIBING BY OPTICIANS.

To the Editors of THE LANCET.

SIRS,—I beg to inclose for your perusal a page from a copy of the *Optician and Photographic Trades Review* sent to me presumably in the ordinary course of advertisement from the offices of the paper. The reply to an "Assistant" (save the mark!) shows what considerable advances the technical education of "optologists" is making when such advice is tendered to *assistants*. I have during the last few months had the following cases through my consulting-room. Two of hemianopsia with cerebral tumour, since dead, both losing six months of invaluable medicinal opportunity, whilst having spectacles provided and changed, &c., by opticians whom they had unfortunately consulted; one of diabetic cataract nine months under an optician with three changes of expensive spectacles; one of optic atrophy five months under an optician with three changes of spectacles. One lady whom I operated upon for cataract (double—could not count fingers with either eye) was four months before carefully examined by an optician "in a dark room" and solemnly assured that there was nothing the matter with her eyes but that her pride was preventing her from wearing the necessary spectacles, &c. Surely it is about time that the question was settled whether it were not better for ophthalmic surgeons to become opticians as well in order, if possible, to protect the public from the educated incapacity of this spreading charlatanism.

I am, Sirs, yours faithfully,

Sept. 28th, 1906. FIFE.

THE TREATMENT OF INEBRIETY.

To the Editors of THE LANCET.

SIRS,—A difficulty frequently experienced in the medical treatment of inebriety is the aversion so many inebriates have to water, whether cold, hot, or aerated. They are more or less thirsty and desire something to drink with their meals—but not water. It has been my lot to treat a very large number of drunkards within the last few years, nearly

all of them belonging to the educated classes, and I have often been asked whether a potable liquid, other than water, milk, tea, or coffee, could not be devised for their benefit. The vehement asseveration of one patient that if he was allowed to drink mild ale it would greatly help in the treatment he was undergoing led me to make the experiment of allowing him to take Allsopp's lager beer (a beverage containing, I believe, about 4 per cent. only of alcohol) with his meals. The result was satisfactory and in a short time there was a very marked improvement in his condition. The tonic constituents of hops and malt apparently suited him better than the strychnine and atropine he had previously been taking. This man had been a heavy drinker of spirits, seldom taking less than a bottle of whisky a day and sometimes more. After some weeks' treatment, during which period he was made to live in the open air and work hard in a garden, he resumed the exercise of his profession and has now for two years been leading an active and useful life, contented with his lager beer. The same concession was accorded to another patient and with equally satisfactory results, as he has been working steadily for more than a year. My experience is that drugs alone are not of much value in dealing with the craving for drink. There is a temporary amelioration often followed by a debauch. When the subject is verging on delirium tremens, as he often is on first coming for medical aid, I have found 25 grains of trional very efficacious, following this up with full doses of the bromides twice a day for three or four days.

I am, Sirs, yours faithfully,

Oct. 6th, 1906. M.D.

THE MILAN INTERNATIONAL EXHIBITION.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

(Concluded from p. 956.)

Milan, Oct. 1st.

THE Section of Hygiene includes many things which we should not put under the denomination of sanitation. But the term hygiene may be taken to cover a vaster field; at the exhibition it includes the battle field. A third, if not half, of the space is taken up with field ambulances and methods of transporting the wounded in war. The main building is circular, with a dome overhead. On entering there are apparatus for the chemical analysis of food, and photographs illustrating various public health services. Turning to the right the visitor is at once confronted by a gigantic plan of the principal hospital of Milan. It consists of a number of pavilions two storeys high and the ventilation is indicated by blue arrows for the outlet and red for the inlet of air. Then there are photographs of some of the details of treatment, such as the application of the Finsen rays and of electricity, and of some special ophthalmic cases. Close by are models of crèche furniture where very young children are so suspended that they may move without much risk of hurting themselves. The firm of Mangini and De-Amici, from Pavia, have a large assortment of autoclaves of the Chamberland and other models. It will interest bacteriologists to see what Italian manufacturers can produce for their investigations. Close by there are a few exhibits that really come under the denomination of sanitation. There is a large stand entitled "*Materiale delle malattie contagiose, Ing. A. Rastelli et Cie, Torino.*" First among these, and occupying very unworthily a considerable space, is what presumably professes to be a cheap way of providing washing accommodation for a large number of persons in a hospital, school, or barracks. There is a long, roughly made, corrugated iron trough. Suspended over this on a pivot are a number of fixed basins, which can only be emptied by tilting them over into the large, ugly, open trough. The latter could never be kept clean, particularly as there are edges or ledges inside which no one would ever attempt to scrub. It would be much safer simply to place the basins on a shelf or table where splashing and dirt would be seen and could be removed. On the other hand, and of very great practical interest in this exhibit, are various efforts to combine the English and the continental conception of a water-closet.

This is a problem which, in England, we are too prone to imagine is solved because, among cleanly people and well kept houses, the seats are comfortable and there is no objection to make use of them. But even among this class of people the fact nevertheless remains that the attitude is not natural and that those who suffer from constipation obtain relief by assuming the position which nature evidently intended. Perhaps it is because constipation is more prevalent in wine-drinking countries that there is throughout the south of Europe such a strong, such an inveterate, objection to sitting down. Also there is this feeling—and in public places, railway stations, and hotels it is not without justification—namely, that there is some slight risk of contamination in sitting down and none whatsoever in standing. So important are these considerations that, even in England, endeavours have been made to put on the market a closet-seat so shaped as not to interfere with the position which nature intended the human being to assume, for in THE LANCET of July 15th, 1905, p. 167, were described two "natural" water-closets designed by Messrs. D. T. Bostel and Sons and by Mr. E. A. Rawlence respectively. At the Milan Exhibition there are a number of such contrivances. One of them is called the "*Brevetto Losse.*" The floor of the closet is concave throughout and of enamelled iron, so that all moisture or wet flows immediately to the drain. Pegs rather more than an inch high and of the size of an ordinary cork provide a dry and firm foothold. From the wall there are two small, polished, wooden rests which can, if required, be pulled down. When not used a counter weight makes them stand back and upright against the wall. Thus these two small pieces of wood cannot in any way be soiled and they do not join in front. Indeed, though slightly curved, they do not approach nearer than some eight inches from each other. There are many closets with similar wooden rests, but as they do not lift up they might be splashed when slops are thrown in the closet. Here, in any case, it will be seen that very clean and not altogether uncomfortable closets are built without seats and yet there is a sufficient rest for those who feel the need of some support.

From this exhibit a luxurious bathroom is reached with furniture rendered aseptic. Then follow kitchen ranges and steam laundry machinery, all manufactured at Milan. Another step brings the visitor to the figures, charts, &c., of the Milan Society against tuberculosis. One institution has an album of photographs, mostly of young women taken before and after treatment, showing the improvement in their looks, while underneath various details are given, including figures as to the amount of flesh that they have gained. The society is supported by voluntary subscriptions and a municipal subvention. There are specimens of the sort of furniture that should be used in the patients' rooms and maps showing where in Italy tuberculosis is most prevalent—namely, in the northern provinces. Then come drawings and pictures of popular sanatoriums, notably that of the Sanatorium Umberti I. of the province of Milan. Many of these institutions have interesting and artistic postcards which are useful as means of propaganda. In the centre of this, the dome or circular part of the building, are the exhibits of the Salsomaggiore health resort and waters, surgical instruments, and a good deal of furniture for operating rooms.

Leaving this central and circular building and taking the branch or annex to the right the extensive show of the Italian Red Cross Society will be seen. Many life-size lay figures illustrate graphically how the wounded should be carried. There are small stretchers that fold in a compact manner so that they can be carried in one hand like a small travelling bag. Of course, there are many ambulance carriages and wagons, but there are also some so fitted that they can be pulled forward either by men or by horses. Some are quite small, with room for only one stretcher inside and one man in front to drag it along. Some stretchers are fitted with legs underneath and mattresses above, so that they can serve as beds on which the patient may remain indefinitely. A few of the Genoa Red Cross Society's stretchers for accidents are painted white or light brown. They look quite pretty and cheerful and this is a great improvement on the former black and forbidding stretchers which seemed to suggest a funeral rather than the hope of recovery. What is special to Italy and very interesting are the large exhibits of the ambulances organised to deal with the prevalence of malarial fever. Here helmets are worn, mosquito netting is hung from them, and there is a small hoop to keep the net away from the face and make it fit securely over the shoulder and chest. Close by is a full sized model

of a hospital between decks. The wooden bunks are so suspended from chains that they can swing so as to meet both the pitch as well as the roll of the ship. Further on fine lay figures and panoramic scenery represent a mountain ambulance ascending the Alps with the aid of mules. Finally, there are the bicycle ambulances with stretchers folded and fitted to the bicycle, while a motor tricycle carries before it a large medicine chest.

Immediately outside the building are three ordinary barges which have been converted into a hospital in which the wounded could travel so far as canals and smooth water can take them. These are not like house boats, where the house part is built on the deck of the barge. There is no deck to these barges and the bottom serves for the floor. A wooden superstructure about 3 or 4 feet high suffices to roof over the barge. In the first one the Italian Red Cross Society has fitted up quite a spacious kitchen at one end. In the centre are the medical officers' quarters, consulting room, pharmacy, and a storeroom. Finally, at the other extremity there is just room for four beds side by side in the centre of the cabin. The next barge is practically a hospital ward. Here are 15 beds made with stretchers suspended to iron fittings made for that purpose. There is a walled-off partition with a bed for the attendant surgeon or nurse. At the further end a smaller compartment holds five patients. In the third barge the wooden superstructure is replaced by canvas fitted to a light and portable iron framework, which can be conveyed from place to place and rapidly fitted to a barge of the usual type. This framework holds three beds one above the other and nine beds on each side of the barge, leaving ample space in the centre. Close to the barges are tent ambulances and railway carriages showing how these are also converted into ambulances. An entire train provides all the services of a hospital as well as the wards for the patients. There are the quarters for the staff, the consulting-room, the kitchen and store-room, and, finally, a luggage van for operating-room. Close by are the German ambulances with larger tents, transportable huts, and also an ambulance railway train. The lay figures do full honour to the smart appearance and stalwart frames of the German soldiers.

In the French department of the Hygiene Section there are a model of the Pasteur Institute, a few chemical products, and a scheme for a more economical process of purifying water by distillation. Then there is an interesting series of large photographs of the lead, minium, litharge, nitrite of soda, and zinc white works of Messrs. Ch. Expert, Bezançon and Co., near Paris. The object is to show the measures taken to prevent the poisoning of the workmen. Thus one photograph presents the entire staff drinking milk and we are told that they must take as an antidote one litre of milk in three instalments every day. Other photographs indicate that they have to change their clothes and have two wardrobes, one for the clothes in which they work and one for their ordinary habiliments. Then there are the ventilators, the tubing, and hoods for drawing away the dust. Near at hand is the model of a dwelling house built on a rotary platform, so that the dwelling may turn round and follow the sun in its course. What advantage this would be to the part of the house which would thus always be turned away from the sun is not explained. There are large plans of the new isolation hospitals built near the fortification at Aubervilliers, Paris. Models of the application of the septic tank system at Orleans and at various railway stations are shown by the Orleans Railway Company. Then there seems to be a rival to the Clayton system in the form of the *Appareil Marot* which is used for disinfecting the holds of ships with *anhydride sulfureux électrisé*. It claims to be also useful in putting out fires. Just opposite this there is a room for dental operations so elegantly fitted as to deprive the dentist's chair of some of its terrors.

The British exhibits are the closest neighbours to those of France, but they constitute a very poor show indeed. In fact, I feel quite ashamed of attempting to describe them, and but for the fact that it would be unfair to the two or three exhibitors who have made some attempt doubtless it would be wiser to pass over this part of the exhibition in silence. The Metropolitan Asylums Board sends some models, notably of the Brook Hospital for fever at Shooter's Hill, Kent, and the scarlet fever hut hospital extemporised in 1892, both institutions being capable of holding 500 patients. Of the private exhibitors Messrs. Doulton and Co. of London have a well-presented show of model bathrooms, closets, public sanitary conveniences, &c. There is also an exhibit by the Wellcome Physiological Research Laboratories but this is not so well arranged as it was last year at the Liége Exhibition. The whole British department looks unfinished, there being bare boards and uncovered walls. It is evident that no one has taken any interest, still less any pride, in this section. It would be infinitely preferable for Great Britain not to have been represented at all than to have made such a miserable show. The only stall where an attendant was present was that of Brand's meat extracts for invalids. There are very few British exhibitors. The Swiss have a much larger array of useful things: model intercepting and soil pipe ventilating chambers, all sorts of heating and warming apparatus, machinery for steam laundries, and quite a big full-sized model of an infirmary with lay figures and aseptic furniture. To compare these exhibits it would seem as if Switzerland was quite a large country and Great Britain an insignificant place. Then the Germans, with still greater completeness, especially in regard to military ambulance, will undoubtedly impress the visitors. They not only display model appliances but illustrate how to extemporise appliances, beds, stretchers, &c., with sticks and straw or grass. The Dutch have a small section and it deals with the very important question of sanitation in dairies, the building, draining, and ventilation of stables, the prevention of cattle disease, and the securing of pure, wholesome milk, butter, and cheese.

Outside the Hygiene Section and among the railway travelling exhibits the Germans have some large paintings not only of railway stations but of the houses provided for railway servants and of the magnificent sanatoriums built on mountains and amid beautiful forests where the railway servants are treated. There are, for instance, the Heilstätte in Nieder-Schreiberhan and that of Melsungen. This gives a very impressive idea of the benefits that have grown out of the law on compulsory insurance.

Not far away, and likewise on the Piazza d'Armi portion of the exhibition, is the pavilion of the Ministry of the Interior as the sanitary authority of the kingdom. Here are models of various sanatoriums that have been assisted by the State, notably those of the islands of Asinara and Poveglia, together with plans and drawings of numerous other sanatoriums. A very fine and large plan of Genoa enables the visitor to see by the colour of the houses which are old, less old, and quite new. Other coloured maps give the history of the distribution of disease both among the populations and the cattle of different parts of the country. Printed reports set forth what attempts have been made with the aid of bacteriological research to combat disease in man, beast, and in plants. A case contains stuffed rats, mice, bats, and other animals that are suspected of being instrumental in spreading plague. There are portable disinfecting stoves, used in rural districts, models of transportable emergency hospitals, and various other sanitary services.

Thus it can be seen that though the main purport of the Milan Exhibition is to bring together all that relates to transport so as appropriately to celebrate the opening of the Simplon tunnel, nevertheless there are also a certain number of exhibits that are of interest to all concerned in the preservation of the public health.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Medical Session.

THE time-honoured first of October has passed and now teachers and taught are beginning to settle down to the work of the session. Vice-Chancellor Hopkinson expressed on behalf of the University the gratification that it gave when Dr. D. MacAlister consented to deliver the inaugural address on the 2nd. The attendance was scarcely so great as usual, there being beyond the circle of the professors and lecturers comparatively few members of the medical profession present, either from the pressure of professional engagements or from lack of interest. Nor were the students very numerous. It must be acknowledged, however, that to many the hour might be inconvenient and the weather also was unfavourable. But it may be as well to remember that the character and the results of a session are not determined by the proceedings on the opening day.

A Schoolboy's Death.

One of those unhappy cases where death so soon follows a

blow that it is impossible to avoid mentally associating them occurred the other week in the case of a pupil of one of the Manchester municipal schools. A boy, aged 13 years, according to the evidence of his father, was a healthy lad, but on the Monday did not feel well and could not eat his breakfast. He went to school, however, and seemed to get better but on Wednesday when he went home at mid-day he was crying and lay on the sofa on his stomach. He said the teacher (not the headmaster) had struck him in the stomach and on the back of the neck. A medical man was sent for but the boy became worse and died at about 3 o'clock on the same afternoon. At the inquest several scholars in the class gave evidence of his having been struck by the teacher. As to the amount of punishment and its distribution there were various statements. One boy said that he had been "clouted" behind the neck and on the back; another that he had been hit on the head and in the back; and a third that he was hit "twice across the ears and once across the face." Three thought the blows were hard but a fourth that they were not "so hard." All agreed that the teacher's hand was open at the time and that he did not hit the boy on the stomach. This contradicts the statement which the boy made to his father but it would be very difficult to follow the movements of a man rapidly and excitedly hitting a lad on the head, back, face, or stomach, as variously asserted. The teacher said, "I caught him with my hand once or twice on the side of the head." Mr. E. D. Telford said that he made a minute and microscopical examination of the body and death was due to rupture of the spleen and he was satisfied that the rupture was due to an injury. There was a bruise of one of the muscles of the abdomen. The coroner said it would be difficult to believe that the injury was received at any other time than during the punishment. The jury returned an open verdict but thought that the teacher ought to be censured. The coroner said he was glad that the jury had taken a merciful view of the case but he was bound to come to the conclusion "that you acted in a very unwarrantable manner." The slight amount of violence that will rupture the spleen in some conditions is well known, but Mr. Telford's evidence gives no hint of anything abnormal in this case so that the conclusion seems to be that the blow must have been heavy or that in falling, for the boy was said to have been knocked down, he might have fallen violently on the edge of a form. The teacher said that he had had the greatest provocation, and one can well understand that a teacher ought to have the temper of an angel and, as the coroner said, "to get a grip on himself before he can hope to master boys." Men of some temperaments are quite unfitted for authority, and the only safe rule is that corporal punishment should only be given by the headmaster. It is well to let this duty, when it is a duty, be carried out, not by the personally aggrieved and perhaps excited teacher, but by one whose own feelings have not been roused. There is a greater security that it may be carried out dispassionately.

"Live Wires."

An occurrence at Bolton a week ago shows how the various applications of science to daily life sometimes, instead of increasing the amenities of our sojourn here, threaten to cut it short, or at all events to make it unendurable. A funeral party was assembling in Bradshawgate, when an electric car turning out of another street "got its trolley head entangled with the overhead wires, bringing down several 'live' wires and guard wires." There were four horses attached to the hearse and one of the guard wires dropped among them, causing them to rear and to plunge violently. Two of the horses were injured, the hearse was damaged, and the driver had a narrow escape, his hat being knocked off by a wire. Fresh horses had to be brought before the funeral arrangements could go on. Hundreds of people were soon on the spot, traffic was impeded, and the tramway was blocked for more than half an hour. Fortunately, no human beings were hurt.

Motor Omnibuses.

In some of the suburbs of Manchester recently motor omnibuses have been destroying all comfort and quiet. Strong protests have been made, much ink—but as yet nothing worse—has been spilt, and newspaper columns have been filled, while no one is happy. Those who suffer and those who cause the suffering are equally miserable, and before long cases of nervous disturbance may be seen by medical practitioners. In the meantime the daily massacre by the motor cars goes on apace and seems likely to continue, for a trumpery fine appears quite inadequate to suppress the evil.

University of Manchester.

A sum of £5000 has been received from the trustees of the late Miss Middleton and is to be allocated towards the endowment of the chair of anatomy.

Oct. 9th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

The Water-supply of Glamorgan.

A CONFERENCE of representatives from the sanitary authorities in Glamorgan and from the county council was held at Neath on Oct. 8th, to consider what steps should be taken consequent upon the passing of the Glamorgan Water Act empowering the county council to make surveys with a view of ascertaining what sources of supply were available for the county. The chairman of the county council advocated the formation of a water board but this proposal was not acceptable just then to the majority of those present and it was ultimately decided to ask the county council to engage an expert to report upon the best method of dealing with the water-supply of the administrative county. The clerk to the Rhondda urban council, while endorsing the action taken by the county council, pointed out that that body was 20 years behind the times. The Cardiff corporation mains, he said, fully charged with water passed through Pontypridd though the people of that town were now suffering from the effects of a water famine. He thought that years ago an attempt should have been made to carry out a joint scheme for Cardiff and the populous places in the "hill country."

Dinners for Cardiff School Children.

During last winter a committee of Cardiff ladies provided dinners for children attending the public elementary schools who were recommended by the school teachers. Altogether 21,518 dinners were given at a cost of a little over 1*d.* for each dinner. It is proposed to continue the scheme during the coming months.

Motor Vehicles for Scavenging Purposes.

About two years ago the Cardiff corporation decided to use steam motors with trailer carts for the removal of street refuse. A large number of horses were sold and it was anticipated that there would be a considerable saving when the motors got into regular work. Four motors, each costing £450, have been in use and it is now reported by the surveyor that they are costing about £20 weekly more than horse traction. It has therefore been decided to discontinue the use of the motors and to return to horses.

The Workmen's Compensation Act.

A case of an unusual character was recently heard before the county court judge at Mountain Ash. In July, 1905, a collier was knocked down by a pony in one of the local collieries. He received injuries on his arm and head and worked intermittently for a few months, when he was entirely incapacitated and gave up work altogether. He received compensation from his employers during the time that he was away from work. At the end of the year he became depressed and in January, 1906, he committed suicide. Medical evidence attributed his depression and consequent suicide to the injuries received in the accident and the judge awarded compensation to the widow.

The Medical Officer of Health of Chipping Sodbury.

The Local Government Board has issued an Order forming a combined district in Gloucestershire for the purpose of appointing a medical officer of health and Chipping Sodbury is one of the constituent districts. Under the Order each district is required to appoint a specified number of delegates to an electing committee. The Chipping Sodbury council has decided not to appoint representatives, the effect of the decision being that the council will have no voice in the appointment of its medical officer of health.

Sewage Disposal at Yeovil.

The alleged failure of the septic-tank system of sewage disposal at Yeovil was referred to at a meeting of the Yeovil

rural district council held on Oct. 1st, when it was reported that in consequence of the breakdown in the tanks the sewage flowed into the river Yeo in a crude state and the stream was in a filthy condition. Mr. Chafyn-Grove said that as a member of the sanitary committee of the Somerset county council he had been officially requested to view the sewage works and he would have to report very unfavourably upon what he had seen. Eventually it was decided to write to the Somerset county council and to request that body to insure the purification of the river and also to address a formal complaint to the Yeovil corporation. The septic tanks were constructed three years ago at a cost of £30,000, but they have not been successful owing, it is stated, to the presence in the sewage of large quantities of leather manufacturers' refuse, consisting of arsenic, wool, hair, lime, &c.

Sanitary Matters in the Tavistock Rural District.

Dr. R Deane Sweeting of the Local Government Board, who has been inquiring into the outbreak of diphtheria at Princetown, in his report which was issued on Oct. 3rd, recommends that an isolation hospital should be provided for the district and that greater attention should be given to the condition of cottage property and the prevention of their overcrowding. Dr. Sweeting urges that wells should be protected against pollution and that cowsheds, milkshops, dairies, and slaughter-houses should be regularly inspected.

Oct. 8th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Changes on the Staff of the Royal Infirmary, Edinburgh.

Dr. Andrew Smart and Dr. W. Allan Jamieson having completed their term of office as physician and dermatologist respectively at the Edinburgh Royal Infirmary, are retired from active duty. Dr. Alexander James has become senior ordinary physician and Dr. R. W. Philip has become junior ordinary physician in charge of the wards devoted to the medical education of women. Dr. Norman Walker succeeds Dr. Jamieson as head of the skin department. Owing to the resignation of Dr. R. McKenzie Johnston from the throat and ear department Dr. A. Logan Turner becomes chief there. The assistant physicians change the wards to which they have been attached, Dr. W. Russell being now senior assistant physician in charge of the wards for incidental delirium and Dr. J. Murdoch Brown in charge of the observation wards. These changes have made a vacancy on the staff of assistant physicians and there are a number of able candidates for this coveted post. The candidates are Dr. Harry Rainy, Dr. Edwin Bramwell, Dr. W. T. Ritchie, Dr. D. Chalmers Watson, Dr. Edwin Matthew, and Dr. John Eason. For the vacancy in the ear and throat department the candidates are Dr. John S. Fraser, Dr. William Guthrie Porter, and Dr. John D. Lithgow.

Changes in the Edinburgh Medical School.

Owing to the appointment of Dr. D. Noel Paton to the chair of physiology in the University of Glasgow a vacancy was made in the lectureship in the extra-mural school. This has been filled by the appointment of Dr. Alexander Goodall to lecture at Surgeons' Hall and at the Medical College for Women. Dr. R. W. Philip having resigned his lectureship on the practice of medicine at the Medical College for Women, Dr. W. Russell succeeds him, having resigned the lectureship on pathology, while he again is succeeded in the pathology lectureship by Dr. Stuart McDonald. Owing to changes in the Royal Infirmary there have been corresponding changes in the lectureship on ophthalmology, laryngology, and otology at the Women's College.

Congratulatory Dinner to Dr. Noel Paton.

Dr. Noel Paton is to be entertained at a congratulatory dinner on Tuesday, Oct. 16th, on the eve of his assuming the duties of professor of physiology in the University of Glasgow. The dinner is to be held in the Royal College of Physicians, Edinburgh.

The Edinburgh Vacation Course for Graduates.

This course has just terminated and from all sides it seems to be regarded as a great success. On Oct. 3rd the Royal College of Physicians held a conversazione in its own rooms in honour of those attending the course. There was a large gathering and the rooms looked their best. There were a number of exhibits of medical interest, while demonstrations were given of the method of determining the presence of dust in the atmosphere and of various electrical apparatus, and lantern demonstrations were given of acromegaly and giantism and of milk-supply and healthy dairies.

Opening of the Bangour Village Asylum.

This asylum was formally opened on Oct. 3rd by Lord Rosebery as Lord Lieutenant of Linlithgowshire, the county in which the asylum is situated. It has been built by the Edinburgh lunacy board, its erection being rendered necessary on account of the authorities of Morningside Asylum intimating that they could not continue to look after the pauper lunatics for whom the parish council of Edinburgh was responsible. As a result of this the city of Edinburgh was formed into a lunacy district and found itself faced by the problem of providing accommodation for about 1000 lunatics. The General Board of Lunacy urged the adoption of the "village system," which had been strongly approved by the late Sir John Sibbald, Senior Commissioner of Lunacy at the time. The estate of Bangour and some adjoining land were purchased at a cost of about £23 per acre. An account of the buildings would occupy much space and it is sufficient to state that the "village" which has arisen on the purchased land is quite self-contained, with a water-supply and reservoir of its own costing no less than £30,000, not to mention electric plant and a complete drainage system. It has even a branch railway of its own, two and a half miles in length, which cost over £30,000. Altogether, the "village" is estimated to have cost £300,000. The medical superintendent is Dr. John Keay, formerly of the Inverness Asylum. It is claimed that this new asylum is most perfect in its arrangements and equipment. After the asylum was duly declared to be open the company gathered for luncheon. Bailie Clark, who has been chairman of the district lunacy board whilst the asylum has been building, occupied the chair. Lord Rosebery proposed the toast of the "Bangour Village." He said he had been asked to speak to them about many things; one thing he would refer to and that was the suggestion that he should plead the cause of a preventive asylum, but he was not such a fool as to rush in where experts feared to tread. All that he would say on that point was that he hoped any such scheme if adopted at all should be tentative until they were sure of the results of preventive treatment, for until that was done they were not justified in adding to the great expenditure on lunacy at present prevailing in the country. He then spoke on the alleged increase of lunacy and dwelt upon the cost to the country. The capital invested in lunatic asylums amounted to £24,500,000 and the annual expenditure was nearly £3,500,000. This was "the vast barren fact that you have to face—that this money is paid by the nation, not for those from whom it can have any hope in the future, or, generally speaking, in whom it can have any confidence as good citizens and subjects, but for those who represent sheer waste and sheer decay. It is for this that we are building these sepulchres of living humanity, these tombs of the intellectually dead." His lordship continued in the same train of thought and speech and in speaking of remedies he thought that if more were done to check the restlessness of the age some good would follow.

Oct. 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Veterinary College of Ireland.

THE seventh session of the Royal Veterinary College of Ireland was opened on Oct. 3rd, when Sir Christopher Nixon, Bart., occupied the chair as President of the board of governors and distributed the medals which had been awarded to the successful students. It is well known that the existence of this very promising college is largely due to his energy and influence. In proposing a vote of thanks to Professor Mettam, whose address dealt with tuberculosis in the lower animals, Sir Christopher Nixon expressed his opinion in favour of the French method of treating tuberculous disease in man, which is chiefly prophylactic, as distinguished from the German system which aims at destruction of the bacilli and cure of the disease.

The Medical Officer of Health of Belfast.

Not for many years has the city been so aroused as over the action of the corporation in the appointment of the medical officer of health and the public press is full of letters on the matter. Great care is being exercised in finding out the exact way the councillors and aldermen voted, as well as the names of those who abstained, and a list is given in the press of those who are retiring in January and who will then have to seek re-election, so that they may be opposed. All the Belfast press—to their credit be it said—denounce the action of the corporation and the question now is, as a writer puts it in one of the daily papers, "Are the Belfast voters going to accept the present position, or will they strike out for a purer civic life?" A strong protest has been sent to the Local Government Board and further action will be taken.

Royal Sanitary Institute.

The members of the Royal Sanitary Institute have had a provincial sessional meeting in Belfast and on the afternoon of Oct. 5th they discussed the Sewage Purification Problem, introduced by Dr. J. D. Williamson, the general opinion being in favour of bacterial purification rather than the precipitation process.

The Typhoid Fever Epidemic in Belfast.

During the past two months an epidemic of typhoid fever has been prevalent in the Windsor end of Belfast and a report from the public health committee on the matter was issued on Oct. 9th. In this it points out that its officials examined the source of the milk-supply of a certain dairy and they found that an officer of this place had recently been in indifferent health but as the illness was slight the cause could not be ascertained. The proprietor was advised that none of the workers of the family in which the alleged sickness occurred should be allowed to have any connexion with the dairy, that their cottage should be disinfected, and that the stream polluted by drainage from the cottage should be cleared out and disinfected with quicklime. The proprietor agreed to all this but declined to suspend the sale of his milk as Professor W. St. C. Symmers had given a certificate that it contained nothing that would cause typhoid fever. In the meantime a blood examination of the person ailing was made by Professor Symmers and the certificate was received on Oct. 6th and it is accepted by the committee as the completion of the chain of evidence. The following is a copy of the certificates which were before the committee:—

Queen's College, Belfast, Oct. 5th, 1906.

DEAR SIR,—The sample of blood taken by Dr. —— from —— Dairy gives a positive Widal reaction; in other words, this patient either is at present or quite recently has been suffering from typhoid fever. I understand that this patient has milked cows belonging to the —— Dairy. If this is true, then you have in this instance a very patent source of danger to the consumers of such milk.

I am, Sir, your obedient servant,
WM. ST. C. SYMMERS.

Queen's College, Belfast, Oct. 5th, 1906.

DEAR SIR,—The water sent to me on September 26th, coming from ——, near ——, contains colon bacilli and also a bacillus very closely allied to the bacillus of typhoid fever. This latter bacillus is one of the para-typhoid group and differs from the true typhoid bacillus very slightly. I venture to point out that these typhoid-like bacilli have only been recognised in recent times and that their significance is by no means well understood—indeed, certain authorities believe them to be the same thing as genuine typhoid bacilli. Hence the water you sent is to be regarded with great suspicion.

I am, Sir, your obedient servant,
Dr. King Kerr. WM. ST. C. SYMMERS.

The procedure to be followed is prescribed by Section 4 of the Infectious Disease (Prevention) Act, 1890, and at the earliest possible moment it will be followed; but as the basis of action is the report of the medical officer of health there may be some little delay and in the meantime the committee desires the public to be placed in possession of the facts at the earliest possible moment. It proposes to publish a chronological statement regarding the outbreak in due course. This statement does not purport to give the full details. The publication of this report has raised widespread dissatisfaction in Belfast:—1. Why are no names given and under such conditions how can the public safeguard themselves? 2. By giving no names good as well as bad dairies are unfairly blamed. 3. Why, if such a report reached the health committee on Oct. 6th, was the public told nothing until the evening of Oct. 8th? 4. Why was the sale of milk allowed to go on even after this report was received? 5. Why was it not stopped long ago when there was even a suspicion? Everyone feels for the unfortunate dairyman because an unrecognised mild case of typhoid fever among his employees has quite inadvertently been the cause of such a serious outbreak, but the public have nothing but severe censure for the weak, inept, and vacillating action of the public health committee of Belfast. It should have acted with promptitude instead of waiting for scientific proof so hard to establish in such cases.

Oct. 9th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Institute of Colonial Medicine.

THE Institute of Colonial Medicine, which has been established in order that French medical men may have facilities for acquiring a knowledge of tropical diseases, will commence its work on Oct. 15th. The duration of the courses will be about two and a half months. Theoretical instruction and laboratory demonstrations will be given at the Paris Faculty of Medicine (École Pratique, 21, Rue de l'École de Médecine) every week-day in the afternoon. Clinical instruction will be given at the Hôpital d'Auteuil, 93, Rue Michel-Ange, twice a week. The teaching staff of the Institute of Colonial Medicine is as follows: practical bacteriology and hæmatology, Professor Roger; parasitology, Professor Blanchard; surgery of warm climates, M. Morestin, professor *agrégé*; diseases of the eye in warm climates, Professor de Lapersonne; epidemiology of foreign countries, Professor Chantemesse; tropical pathology and hygiene, M. Wurtz, professor *agrégé;* and skin diseases, Professor Gaucher.

Ethical Rules applicable to Dispensaries.

The general council of the medical societies of the district of Paris and the Seine has received from M. Piot and M. Chandebois a report on behalf of the commission appointed at a meeting held last July. The report deals with ethical rules applicable to the work of the dispensaries and the recommendations made by M. Piot and M. Chandebois are as follows. 1. It is essential that dispensaries and similar institutions should be reserved solely for necessitous patients. 2. When patients who are able to pay fees receive free attendance repeatedly at dispensaries the medical society of the district in question (*arrondissement correspondant*) shall endeavour to put a stop to the abuse by making representations to the medical staff and inviting them as professional men to act in accordance with the principles accepted in the general interest by the general council of the medical societies. 3. Each medical society shall prepare a list of the dispensaries in its district, together with particulars as to their working and their financial position.

Dysentery at Toulon.

In consequence of the cases of dysentery which have occurred on board ships-of-war at Toulon the maritime prefect has informed the heads of departments and the commanders of vessels in the principal dockyard and the Arsenal du Mourrillon that no drinking-water is to be used except such as is specially supplied for this purpose and that no washing of any kind may be done near the supply-pipes (*pompes fontaines*). The turncocks and gendarmes have strict orders to see that these regulations are complied with.

Oct. 8th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Two New Hospitals in Vienna.

THE English system of providing funds for new hospitals by private munificence is gaining a firm hold also in Austria and two up to date institutions of this kind have been added to the number of those already available. One is devoted to internal and surgical diseases of children only and contains 100 beds. It is housed in a pavilion of the long existing Franz Josefs Hospital which was selected because it is situated in a poor neighbourhood. The new hospital is a gift by a private gentleman who gave the hospital committee full power to spend as much money as it thought necessary to obtain a first-class modern and practical institution. The hospital is therefore equipped with all the latest apparatus

for scientific and diagnostic work. Special laboratories, an x-ray department, disinfecting appliances, and very comfortable nurses' apartments have been provided. The operating theatre is at the top of the building; its walls are covered with glass and all preparatory work, such as washing, disinfecting, anæsthetising, &c., is done in special anterooms. The rooms are heated by steam. The other new hospital is an addition to the Sophienspital and is provided with all requisites for the diagnosis and treatment of internal disease as well as for nose, throat, and ear work, a specialty which is very much cultivated now in Vienna. This last-mentioned institution contains beds for 70 patients, and clinical instruction will be given in the out-patient department in accordance with the wishes of the founder. Each of the two hospitals has cost about 1,000,000 kronen (£40,000), and ample space is provided for future enlargement of the wards.

Action for Damages against a Dentist.

An action brought by a patient against a dental surgeon was heard recently before the Court of Appeal. The facts are briefly as follows. Immediately after the extraction of several of his teeth the patient thought that he could feel a portion of a carious root in the wound and asked the dentist to examine the place in question. The dentist declared it to be the denuded alveolar bone and sent the patient away. Soon afterwards the place became painful and in reply to a letter of complaint the dentist wrote that no piece of tooth had been left in the wound. The pain, however, continued for about six months and another dentist who was consulted removed a fragment of a tooth from the old wound. Thereupon the patient sued the first dentist for 7000 kronen (nearly £300) damages, but the judge, after hearing medical evidence, decided that after an operation of that kind it was impossible to know whether a fragment was left behind or not and that there was nothing to justify the claim on the ground of negligence *contra legem artis*. The case was therefore dismissed.

The late Professor von Neumann.

Professor von Neumann, who died recently near Vienna, combined the abilities of an excellent teacher with those of a most acute observer. His class-room was thronged because he knew how to enliven his lectures on dermatology and syphilis and to impress the clinical facts on the mind of the audience. His principal work was the elucidation of the nature of tertiary syphilis in the south-eastern parts of Europe—namely, in the Balkan regions, where the disease appears in several types unusual in more civilised countries. The deceased was an uncompromising opponent of the system of fixing an age-limit for university professors.

The Winter Term of the University of Vienna.

The winter term of the Vienna Medical Faculty begins nominally on Oct. 1st, but the actual commencement of the classes and lectures varies between the 1st and the 14th of the month. Professor von Noorden, the successor of Professor Nothnagel, will lecture on internal medicine and is already in Vienna superintending the alterations in the clinic. He will continue to make the diseases of metabolism his specialty and numerous medical men in this and other countries have already intimated their intention to work in his clinic for that purpose. Apart from this new departure the programme for the courses has not changed materially from the one issued for the last winter term. Lectures on surgery and medicine will be delivered by 15 professors and numerous *privat-docenten* in addition to the special courses delivered by the clinical tutors and assistants. These latter admit only a limited number of students and offer to everyone taking such a class an opportunity of doing practical work. The fees for the regular clinical lectures for the whole term, lasting for six months, are very low, only £1 1*s.* for students and £2 2*s.* for graduates, whilst the fees for the special classes vary from £4 4*s.* to £8 8*s.* Gynæcological instruction is also obtainable at the same rate, whilst for the specialised subjects of otology, rhinology, ophthalmology, bacteriology, urology, and similar subjects, there are courses which last from four to six weeks, the average fees being £2 10*s.* The number of classes to be held during the semester will not be less than 120. Ample opportunity for useful work is thus offered.

Medical Supervision of School Children.

The Board of Education, under the direction of the Ministry of Education, has worked out the details of a new regulation referring to the supervision of school children by medical practitioners who will periodically examine the health of the children attending the schools. As the chief object of the regulation is the prevention of disease they will devote their attention mainly to prophylactic work, not to the treatment of children who may become ill. The school medical officers will have authority in all questions relative to the physical and psychical well-being of the pupils; they will control the gymnastic exercises and before each school term they will examine the children as to the state of the eyes, ears, throat, and spine, so as to discover any who may be unfit for the work of the class in regard to singing, gymnastics, and needlework. First aid may be given if necessary but otherwise medical treatment is not to be undertaken. The proposed remuneration is very low, only 40 kronen (about £2) per class per annum and the Medical Council is making every effort to raise the payment to at least £4 per class, so that a school of (on the average) 22 classes would pay at least £80 a year. It is also in contemplation to appoint special practitioners who would have to give up private practice and to devote all their time to the prophylactic work. Of course, a large number of schools would have to be allotted to each practitioner appointed in order to compensate for loss of private work.

Oct. 8th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

The Medical and Sanitary Geography of Turkey.

THE Imperial School of Medicine in Constantinople is about to publish a book which will prove to be of considerable general use and of special value to medical men residing in the Ottoman Empire. It will contain information relative to the internal conditions and natural features of the country, such as the population, the climate, the rainy seasons and other meteorological incidents, endemic maladies, the nature and peculiarities of the soil in various places, the principal lakes and rivers, thermal baths, medicinal springs, &c. This "Géographie Médicale et Sanitaire" will be issued under the direct supervision and editorship of the authorities of the above-named school. The sanitary inspectors and the medical men of the different provinces and districts of the Empire will furnish all the required facts and information necessary to make this important treatise fairly complete. It will contain illustrations and several maps. Descriptions of certain methods of medical treatment and of hygienic and prophylactic measures adopted in various localities will also be found in it.

Public Health Work.

The Turkish newspapers published in Stamboul deplore the prevalence of superstitious usages among the lower classes of the population who are far from willing to submit to the new regulations for disinfection and prevention of disease recently introduced by the High Commission of Public Hygiene. These people adhere obstinately to the use of all sorts of domestic remedies, amulets, talismans, and recitations from the Koran, and if infectious disease breaks out, they attempt, by every possible stratagem, to hide the fact from the sanitary authorities, thus favouring the spread of the contagion and increasing the danger to the general public. The above-named commission is, however, endeavouring to combat this superstitious ignorance. Another useful measure taken by it is the disinfection every fortnight of all public vehicles, tramcars, and railway carriages, as well as of the local steamers plying on the Bosphorus and the Golden Horn. The Mahsoussé and the Shirket-i-Hairié Navigation Companies, owning vessels in the Marmora and the Bosphorus, have been directed to furnish lists of their steamboats and landing-places to the commission, to the municipal inspectors, and to the authorities of the service of sanitation and disinfection. There is also some ground for believing that the drainage of the suburbs will receive attention, that several public slaughter-houses will be established, and that other measures will be taken to improve the sanitary and hygienic condition of the metropolis. Among these measures I must especially mention the decision to appoint trained assistants to work in conjunction with the medical men of the different municipal districts.

A Popular Panacea.

An almost universal domestic remedy in great vogue among the ignorant classes of the Mussulman population is composed of as much yaghourt as can be purchased for

20 paras (1*d.*), three pinches of powdered camphor, one pinch of cinnamon, and several cloves, all mixed together and swallowed in a tumblerful of water. Yaghourt (a word the European spelling of which varies a good deal) is made from ordinary milk by partial evaporation and subsequent addition of a small portion from a previous supply, so as to produce a peculiar fermentation. The *Levant Herald* states that the above-described remedy was used in the time of Sultan Mahmoud I. who reigned from 1730 to 1754. At that period the only dispensary in Constantinople was the still-existing so-called Missir Tcharshi, or Egyptian bazaar.

Oct. 4th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Care of Weak-minded Children.

A LARGE and influential deputation, including members of medical, scientific, and charitable societies, waited on the Minister of Education of Victoria recently to urge the necessity of the State adopting measures for the care and education of weak-minded children. The Minister replied that while he recognised the merits of the proposal the difficulties were great. He would, however, make it a Cabinet question and also would confer with a committee representing the deputation.

Hospital Affairs.

The report read at the thirty-seventh annual meeting of subscribers to the Children's Hospital, Melbourne, stated that the number of in-patients during the past year was 1823 and that the attendances at the out-patients' department totalled 79,727, the latter number being an increase of 1692 over the previous year. The balance-sheet showed the receipts for the year on account of maintenance to have been £9378 and the expenditure £8635. Some of the speakers at the meeting complained of the action of the board of management of the Alfred Hospital in maintaining large wards for the reception of children and so overlapping the work of the Children's Hospital.—The twenty-fourth annual report of the Austen Hospital for Incurables stated that an unusually large number of patients had been admitted to the hospital during the past 12 months, the increase being only in part accounted for by the opening of the Kronheimer wing. The whole of the beds in the various wards were in constant occupation, all vacancies, as usual, being filled as soon as they occurred.—The annual report presented to the seventeenth annual meeting of the supporters of the Sanatoriums for Consumptives in Victoria showed that during the year 134 males and 100 females had been admitted, and that during the same period 71 males and 48 females had either recovered or were improved. The average stay of a male patient was 95 days, while that of a female was 92 days. The cost of maintenance was £4525, making an average cost per patient of £75.—The alleged abuse of hospitals in Melbourne has recently been discussed in the press. The inspector of charities maintained that means existed for preventing abuse and for imposing penalties in cases of imposition. Every patient has to sign a declaration that he is unable to pay the ordinary medical and nursing fees. In the event of an incorrect declaration the amount due can be recovered in court or under the Police Offenders Act imposition may be charged, which may entail imprisonment. But what is meant by "inability to pay ordinary fees"? The inspector's own view of ordinary fees is erroneous.—The following new by-laws have been made by the board of directors of the Sydney Hospital:—

> Honorary medical officers who have served the institution for a period of not less than 12 years shall be eligible for elections as honorary consulting medical officers, and in the event of any honorary consulting medical officer being re-elected as an honorary medical officer he shall *ipso facto* cease to be an honorary consulting medical officer.
>
> The naval medical officers of His Majesty's fleet serving on the Australian station may be appointed by the board to be "honorary consulting medical officers to seamen."
>
> Such officers to have the right of visiting seamen of His Majesty's navy whilst in hospital, and to be attached to, but not to form part of, the honorary medical staff of the institution.

—The committee of the Newcastle Hospital, New South Wales, has served on the medical superintendent a month's notice to dispense with his services. The trouble arose through the vice-president issuing an order that the medical superintendent should not be absent from the hospital at the same time as the registrar. The superintendent resented this "unauthorised mandate," as he termed it, and appealed to the committee; he said it would obviate unpleasantness if he could attend their meetings at will and not only when arraigned before a "court of Star Chamber."

An Unregistered Practitioner Fined.

At the Macarthur police court, Victoria, a man was prosecuted for pretending to be a doctor of medicine and practising as such. Evidence was given to show that he had bills printed containing the words, "Dr. Reville, M.D.," and that he treated patients and was paid for his advice. He pleaded guilty and was fined £10 and costs. He produced a diploma from the "International University of Chicago" but said that it was not registrable in Victoria.

Patent Medicines.

The following motion has been agreed to in the House of Representatives of the Commonwealth:—

> That in the opinion of this House, in the interest of the health of the community of Australia, it is desirable that all patent or proprietary medicines, all infantile and artificial foods, all medical and surgical appliances which purport to cure or alleviate any disease to which the human frame is subject, should be critically examined on entry into the Commonwealth—(*a*) to ascertain their contents and composition; (*b*) to ascertain their value from a curative standpoint; (*c*) to ascertain their value as a food; (*d*) to ascertain their value as remedial agents.

The motion also provided that descriptions of the composition of each article should appear on the packages and that it should be punishable to make false statements in this regard.

Death from an Overdose of Podophyllin.

An inquest has been held on a man who obtained from a druggist three-pennyworth of podophyllin pills and three-pennyworth of podophyllin powder. He took the whole—about 18 grains of podophyllin—and became very ill and died. The medical evidence showed that the cause of death was an overdose of podophyllin. The drug is not scheduled as a poison in the meaning of the Poisons Act. The coroner was of opinion that the druggist should have safeguarded the sale of such a dose which he ought to have known to be poisonous.

A Midwife Sentenced for Manslaughter.

A woman, aged 73 years, practising as a midwife, was found guilty of manslaughter at the Melbourne General Sessions and sentenced to 12 months' imprisonment. A young married woman whom she had attended in a confinement died from blood poisoning. The judge said the evidence showed that the woman had shown either utter disregard of her duty or want of knowledge to such an extent that the person who had entrusted herself to the prisoner's care lost her life.

Preservatives and Colouring Substances in Butter.

The Board of Public Health of Victoria has adopted a number of regulations concerning milk, butter, and meat. The standard for butter is that it shall contain not less than 80 per cent. of milk fats or more than 15 per cent. of water. Boron compound (estimated as boric acid) or saltpetre may be added to butter as a preservative substance in a proportion not exceeding 0·25 per cent. of its weight. Harmless vegetable colouring is allowed but the use of sesame oil or foreign fat or any other preservative than set forth is prohibited.

Medical Men and Friendly Societies.

A committee, consisting of the presidents and secretaries of the various local medical associations of New South Wales, has drawn up a draft of a model agreement to be used in taking positions as lodge surgeons.

Sept. 6th.

TORQUAY INFECTIOUS DISEASES HOSPITAL.—The annual report of this institution, which has just been issued, shows that during 1905 there were 36 cases of infectious diseases admitted, 27 of these being cases of scarlet fever. No death occurred. The average stay of each patient was 41 days. The expenditure in connexion with the institution was £541 compared with £507 in 1904, when 27 cases were treated. The Cockington hospital was opened during the year for one case of smallpox. The patient was under treatment for 48 days at a cost of £45. The total cost of the maintenance of this hospital during the year was £97.

Obituary.

ALEXANDER CROMBIE, C.B., M.D. EDIN., L.R.C.S. EDIN., L.S.A.,

BRIGADE-SURGEON-LIEUTENANT-COLONEL, I.M.S.

THE news that Brigade-Surgeon-Lieutenant-Colonel Alexander Crombie died in London on Sept. 29th will be received with deep sorrow by all who knew him, not only in this country but also in India by the many friends amongst whom he spent so many years of his life, and where the greater part of his life's work was done. Dr. Crombie was the youngest son of Mr. David G. Crombie, of Kilminning, Fifeshire, and was born in December, 1845. After completing his early education at St. Andrews he went to Edinburgh to study medicine and graduated at that university, taking his M.B with honours in 1867 and his M.D. degree in 1870. In 1867 he also became L.R.C.S. Edin. Dr. Crombie was a Fellow of the University of Calcutta, an Associate of the Order of St. John of Jerusalem, and was created a Companion of the Bath (civil division) in 1902. Dr. Crombie entered the Army Medical Service on April 1st, 1871, taking first place in the competitive examination. He, however, resigned his commission in the following December, for the purpose of entering the Indian Medical Service, which he did in the following March, again obtaining the first place in the list of successful candidates for commissions.

Arriving in India in July, 1872, after a few months' regimental service, Dr. Crombie was appointed resident surgeon at the Calcutta Medical College and in 1873 was appointed lecturer on surgery and second surgeon to the hospital. In 1874 he became professor of materia medica and second physician. From February, 1875, until April, 1877, he held the appointment of civil surgeon at Rangoon and health officer of that port. At the last-named date he was transferred to the civil surgeoncy of Dacca where he was also superintendent of the medical school, the Mitford Hospital, and the lunatic asylum. He at the same time was in medical charge of the gaol. In April, 1880, he was transferred to the civil surgeoncy of Simla, a post which he held for two years, and then returned to his former post at Dacca, where he remained until 1888 when he was transferred to Calcutta to take up the appointment of surgeon-superintendent of the Presidency General Hospital, which post he held for ten years. During this time Dr. Crombie was engaged in a large practice, chiefly consulting work, as well as his onerous official duties. He retired from the service in 1898 and on leaving Calcutta was presented by his medical *confrères* in that city with a testimonial expressing the high esteem and affection in which they held him. On his return to England he practised his profession in London as a consulting physician. He was appointed a Member of the Medical Board at the India Office and filled that position for three years; he held the office of physician to King Edward VII.'s Hospital for Officers; and it was in recognition of his services to the sick and wounded officers who returned home from the Boer war that he received his C.B.

Dr. Crombie lectured on the Diseases of Tropical Climates at the Middlesex Hospital Medical School and also at the London School of Tropical Medicine. He was nominated by the Secretary of State for India to attend the international medical congresses at Moscow in 1897, at Paris in 1900, and at Madrid in 1903, representing India at those meetings. Dr. Crombie was the author of many very able papers on professional subjects. Special mention may be made of his treatises on "The Unclassified Fevers of the Tropics" and "Normal Temperature in India"; and his articles on "Sprue," "Hill Diarrhœa," "Congestion," and "Abscess of the Liver" in Allchin's Manual of Medicine. Dr. Crombie was a most painstaking physician, earnest and conscientious in his work, an able diagnostician, and a loyal and sympathetic colleague. He was a man of great breadth of view, whose opinion on other than professional matters was often sought and always willingly given, regardless of trouble or personal inconvenience. He was a thoroughly trustworthy man, who never failed one of the many friends whom he leaves to mourn their loss, a loss in which are involved not only relatives and friends but also the great service of which he was a distinguished member.

WILLIAM SPENCER WATSON, F.R.C.S. ENG., M.B. LOND.

Mr. William Spencer Watson of 44, Chepstow-place, W., who died on Sept. 17th at the age of 70 years, was the son of the late Dr. John Watson, who formerly practised for over 50 years in Bloomsbury. His student career was passed at King's College where he obtained the Warneford entrance scholarship and later the senior Warneford scholarship in medicine. He was elected an Associate of King's College in 1857 and admitted a Member of the Royal College of Surgeons in the same year. He took the M.B. Lond. (honours) in 1860 and the F.R.C.S. Eng. in 1862. Mr. Watson was for many years surgeon to the throat department of the Great Northern Central Hospital, and also to the Central London Ophthalmic Hospital and to the Royal Eye Hospital. He was the author of "Diseases of the Nose and its Accessory Cavities" which passed through two editions and was for many years a standard work, also of "Anatomy and Diseases of the Lachrymal Passages," "Abscess and Tumours of the Orbit," "Keratitis," and of numerous contributions to the journals and Transactions of the societies. He was a Fellow and formerly on the council of the Royal Medical and Chirurgical, Medical, and Ophthalmological Societies, and until a few years ago was in active consulting practice in Henrietta-street, retiring owing to failing health. An operation for cataract resulted in total blindness and for the last few years he had been a complete invalid. He was a member of the court of the Sadlers' Company and a Past Worshipful Master and until quite recently a regular attendant at the court where he delighted to meet his fellow liverymen, despite his infirmity of sight.

JOSEPH MAY, M.R.C.S. ENG., L.S.A., J.P.

Mr. Joseph May of Devonport died at Falmouth on Sept. 25th, in his sixty-ninth year. He was the elder son of the late Alderman Joseph May, F.R.C.S., of Devonport, and received his medical education at Guy's Hospital, taking the qualifications of L.S.A. and M.R.C.S. Eng. in 1859 and 1861 respectively. For a short time he was an assistant surgeon in the Royal Navy. He was appointed medical officer of health of Devonport in 1874 and held the position until July, 1905, when he was appointed consulting medical officer to the Devonport sanitary authority. Mr. May was formerly surgeon-lieutenant-colonel in the 2nd Devon Volunteer Regiment. He was an earnest Churchman and for many years was a churchwarden at St. James's, Keyham. Mr. May had an extensive practice in Devonport and his death is much regretted there. He was one of the kindliest of men and a good friend to the poor. Much sympathy is felt in the "three towns" for Mrs. May, especially as their son died in June last at the age of 19 years.

JOHN HANCOCKE WATHEN, M.R.C.S. ENG., L.R.C.P. EDIN., L.S.A.,

ALDERMAN OF THE CITY AND COUNTY OF BRISTOL.

Mr. Wathen died at his residence at Sea Walls, Stoke Bishop, near Bristol, on Oct. 5th, in his sixty-second year. He was born at Fishguard, Pembrokeshire, and received his medical education at University College, London. His diplomas were M.R.C.S. Eng. taken in 1865; L.S.A. taken in 1866; and L.R.C.P. Edin. taken in 1867. After holding resident appointments at the West London Hospital and the Bristol General Hospital Mr. Wathen commenced practice at Clifton, being for some time in partnership with Dr. C. Steele. He was for several years medical officer to Clifton Wood Industrial School. He took a great interest in the Volunteer movement and a few years ago retired from the 1st Gloucester Volunteer Artillery with the rank of surgeon-major. He was elected for the Clifton ward of the Bristol town council in 1893 and in 1897 was created an alderman. Mr. Wathen took a great interest in church matters and in 1898 he was appointed a member of the church extension committee. He was highly popular in Clifton and Bristol and will be greatly missed by a wide circle of friends. Much sympathy is felt for his widow, who was a daughter of the late Sir George Edwards of Bristol.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen have passed the first examination of the Board in the subjects indicated :—

Chemistry and Physics.—Isaac Barnett Bernstein, Leeds University; Alured Charles Lowther O'Shee Bilderbeck, St. Bartholomew's Hospital (exempt Physics); George Martin Chapman, Otago University and London Hospital; Willoughby Gordon Grant, London Hospital; Spencer Frederick Harris, Middlesex Hospital; Arvor Jones, University College of North Wales, Bangor; William Morgan Langdon, Guy's Hospital; Reginald Kinloch MacGregor, St. Bartholomew's Hospital; Pestanji Manekji Masina, B.A., Bombay University and University College (exempt Physics); Guy Malcolm May, King's College Hospital; Malcolm Melton Melrose, Manchester University; Sumner Hugh Smith, King's College; Lionel Charles Watkins-Baker, University College, Bristol; and James Ernest Studholme Wilson, London Hospital.

Biology.—James Alfred Ayton Boddy, Manchester University; George Martin Chapman, Otago University and London Hospital; Dunstan Thierry Corke, London Hospital; Emmanuel de Meza, London Hospital; Maurice Dwyer, Leeds University; William Henry Edmonds, Guy's Hospital; Frank Garratt, University College; Ivor Robert Hudleston, University College, Bristol; Frank Mainwaring Hughes, London Hospital; Donald Henry McDonald, Birkbeck College; Owen David Baker Mawson, London Hospital; John Caspar Munch, London Hospital; and John Basil Robinson, London Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—In the Preliminary Science Examination for the Licence in Dental Surgery the following gentlemen passed in Chemistry and Physics :—

James Fernandez Howard Clarke, Charing Cross Hospital; Robert Hodgson, Birmingham University; Linthall Harry Leatherby, Charing Cross Hospital; and James Roy Williams, Technical School, Manchester.

SOCIETY OF APOTHECARIES OF LONDON.—At the primary examinations the following candidates passed in the subjects indicated :—

PART I.

Chemistry.—A. Jonathan, Royal Free Hospital.
Materia Medica and Pharmacy.—A. Jonathan, Royal Free Hospital; H. S. Naylor, Leeds; and D. L. Schwabe and A. Singha, Royal Free Hospital.

PART II.

Anatomy.—E. W. Archer, St. Mary's Hospital; G. K. Aubrey, King's College Hospital; A. Baxendale, Manchester; J. Brearley, Leeds; E. C. Brisco-Owen, Cardiff; F. C. Eberhardt, Edinburgh and Birmingham; and M. Remers, Manchester.
Physiology.—G. K. Aubrey, King's College, Hospital; E. C. Brisco-Owen, Cardiff; F. C. Eberhardt, Edinburgh and Birmingham; and G. S. Richardson, Leeds.

At a meeting of the Master, Wardens, and Court of Assistants of the above Society held at their hall on Oct. 9th the honorary freedom of the Society was conferred upon Mr. Alderman and Sheriff T. B. Crosby, M.D., who is a Licentiate of the Society. The Master (Mr. E Parker Young) and Wardens subsequently entertained at dinner Dr. Crosby, the members of the Court of Examiners, the Deans and Wardens of the metropolitan schools of medicine, and a large number of the Livery of the Society.

UNIVERSITY OF DURHAM.—At the Convocation held on Sept. 29th the following degrees and diplomas were conferred :—

Doctor in Medicine.—Lewis Augustus Clutterbuck, M.B., B.S. Durh.; Sophia Bangham Jackson, M.B., B.S. Durh.; Philip William James, M.B. Durh.; Thomas Corrie Rutherfoord, M.B., B.S. Durh.; William Simpson, M.B., B.S. Durh.; and John Aston Swindale, M.B., B.S. Durh.
Doctor in Medicine for practitioners of 15 years' standing.—Alfred James Glanville Barker M.R.C.S. Eng.; Frederick James Brown, M.R.C.S. Eng., L.S.A.; James Douglas Cree, M.R.C.S. Eng., L.R.C.P. Lond.; Thomas Leslie Crooke, L.R.C.P. & S. Edin.; Edward John Cross, M.R.C.S. Eng., L.R.C.P. Lond., D.P.H.; Matthew Dobbs, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A.; Henry James Edwards, L.R.C.P. & S. Edin., D.P.H.; Edward Ellis, L.R.C.P. & S. Edin., Joseph William Gill, M.R.C.S. Eng., L.R.C.P. Lond., D.P.H.; Frederick Maurice Graham, F.R.C.S. Edin., L.R.C.P. Edin., L.F.P.S Glasg.; Charles Robert Mortimer Green, F.R.C.S. Eng., L.R.C.P. Lond., L.S.A., D.P.H.; Hubert Joslen, M.R.C.S. Eng., L.R.C.P. Lond.; Arthur Beresford Kingsford, M.R.C.S. Eng., L.R.C.P. Lond., D.P.H.; Robert Enwright Lauder, F.R.C.S. Edin., L.R.C.P. Lond., D.P.H.; James Menzies, L.R.C.P. & S. Edin., L.F.P.S Glasg.; Charles John Sharp, M.R.C.S. Eng., L.R.C.P. Lond.; Arthur George Southcombe, M.R.C.S. Eng., L.R.C.P. Lond., D.P.H.; and George Gordon Stuart, L.R.C.P. & S. Edin., L.F.P.S Glasg.
Master in Surgery.—Thomas Young Simpson, M.D., B.S. Durh., M.R.C.S. Eng., L.R.C.P. Lond., London Hospital.
Bachelor in Medicine (M.B.) and Bachelor in Surgery (B.S.).—Vincent Edgar Badcock and George Denholm, College of Medicine, Newcastle-upon-Tyne; Reginald Inglis Douglas, M.R.C.S. Eng., L.R.C.P. Lond., St. Bartholomew's Hospital; Neville Avery Eddlestone, College of Medicine Newcastle-upon-Tyne; Florence Barrie Lambert, College of Medicine, Newcastle-upon-Tyne, and London School of Medicine for Women; Arthur Cecil Hays McCullagh and Ernest Martin, L.R.C.P. & S. Edin., L.F.P.S. Glasg., College of Medicine, Newcastle-upon-Tyne; Bertha Mary Mules, London School of Medicine for Women; Jessie Jean Martin Morton, Edinburgh School of Medicine for Women; Sidney Nix, L.R.C.P. & S. Edin., L.F.P.S. Glasg., St. Mary's Hospital; Frederick Charles Pybus and George Robert Philipson, College of Medicine, Newcastle-upon-Tyne; Donald Murray Ross, St. Thomas's Hospital; and Thomas Leathard Wormald, College of Medicine, Newcastle-upon-Tyne.
Bachelor in Hygiene (B.Hy.).—Isaac Thompson, M.B., Ch.B., New Zealand.
Diploma in Public Health (D.P.H.).—Isaac Thompson, M.B., Ch.B. Edin., New Zealand; and John Henry Tripe, M.R.C.S. Eng., L.R.C.P. Lond.

UNIVERSITY OF GLASGOW.—The following have passed the first professional examination for the degrees of M.B. and Ch.B. in the subjects indicated (B., Botany; Z., Zoology; P., Physics; and C., Chemistry):—

David Rutherford Adams (P.*), James Browning Alexander (B.), John Campbell Hill Allan (B., Z.), William Anderson (P.), Alexander John Archibald (C.), Charles Auld (P.), Robert Blackie Austin (B., Z., P., C.), Alexander Baird (P.), William Egon Halman Beard (B., P.), James Elliot Black (B., Z., P., C.), Archibald M'Allister Blackwood (P.), John Bower (Z., P.), James Turner Brown (P., B.*), Robert Archibald Brown (Z.), Samuel Bryson (Z.,* P.), James Alexander Stewart Burges (B., P.), John Cameron (B., Z., P.), John Archibald Steele Campbell (P., C.), Thomas Simpson Campbell (B., C.), George Wilson Clark (B., Z.), James Alphonsus Joseph Conway (B., P.), James Headrick Coulter (Z.), James Maclaren Dawson (Z.), Robert Hunter Deans (B., P.), John Nairn Dobbie (B.), Peter Drummond (C.*), Robert Drummond (B., P.), Alexander Moffat Dunlop (C.), James Dunlop, M.A. (B.), Andrew Scobie Findlay (B.), James Findlay (Z.), Robert Findlay (B., P.), Hugh Forrest (B., P.*), Thomas Lochhead Fraser (P., C.), David Thomas Crichton Frew (Z.,* C.*), Andrew Garvie (B., P.*), Nicolas Gebbie (B., P.*), Adolph Robert Hanns Geyer (B., P.), Pietro Giuliani (Z., C.), John Gray (P.*), George Cyril Griffiths (B., P.), Archibald Campbell Haddow (B., Z., P., C.), John Reid Haldane (B., Z., P.), James Harper, M.A. (C.), James Hendry, M.A. (B.,* P.*), Peter Henretty (P.), William Howat, M.A. (C.*), William Hunter Howat (C.), James Jack (B., P.,* C.*), Cochran Johnston (C.), Walter Haddow Kay (B.), Charles Joseph Kirk (B.), Alexander Kirkhope (B. P.), John M'Callum Lang (B., P.), George Smith Livingston (B. P.), Donald Christopher Macdonald (B., P.), Ian Macdonald (Z.), Donald M'Intyre (Z.), Balfour M'Kean (B., P.), Thomas Jones Mackie (B.,* P.*), James David Mackinnon (B., P.), Murdo Mackinnon (P.), Andrew Bruce MacLean (B.,* P.*), Archibald M'Leod (Z., P.), William Alexander Maclennan (P., C.), Campbell Macmillan (P.), William M'Murray (B., P.), Stephen Anderson MacPhee (B., P.), John Pearson M'Vey (B., P.), Alexander Thomson M'Whirter (B., P.), Malcolm Manson (B., P.), Francis William Martin (C.), Ralph Millen (B.), John Mitchell (B.), Neil Morison (B.), Andrew Ross Muir (B., P.*), Michael John Murray (B., Z., P.), Hugh Loudon Neil (B., P.), John Paterson (B., Z., P., C.), Thomas Paterson (B., Z., P., C.), John Penman (B., Z., C.), Arthur Poole (Z., P.), Arthur Stanley Richmond (B., P.), Daniel Wright Ritchie (B., P.*), Alexander Forbes Ross (C.), John Ivison Russell (B., Z., P., C.), John Livingstone Scott (P.), James David Speid Sinclair (P., C.), William Sneddon (B., Z., P.), George Rae Spence (C.), John Stewart (B., P.), John Alexander Stewart (B.), Thomas Louis Grenet Stewart (C.), Gilbert Innes Strachan (B., P.,* C.), John Norman Sutherland (Z.), William Taylor (B., P.), Stephen Veitch Telfer (B., Z.), Edward Napier Thomson (Z., P.), James Douglas Walker (B., P.*), John Cuthbertson Walker (P.), Alexander Guthrie Semple Wallace (B., P.), Thomas Walmsley (B., P.), Egerton Carl White (B., Z., P.), William Herbert Nairne White (Z.), Thomas Whitelaw (B.), Harold Edward Whittingham (C.*), Herbert Matthew Williamson (Z.), James Williamson (Holytown) (B., Z.), Alexander Stewart Wilson (B., P.*), Douglas Wilson (B., P.), George Jackson Wilson (B., P.), Hugh Gilmer Wilson (B., Z.), William Richard Wiseman, M.A., B.Sc. (B., Z.), John Crawford Wood (B., Z.), Henry Yellowlees (B., Z., P.,* C.), and Fergus Hay Young (B., P.).
Women.—Mary Alexander (B., Z.), Agnes Barr Auchencloss (B., Z.), Isabel Inglis (B., Z.) Katherine Stewart Macphail (B., Z.), Jeanie Douglas M'Whirter (Z.,* C.), Barbara Grace Rutherfurd (B., Z.*), Florence Elizabeth Sexton (B., Z.*), Isabel Jane Stark (B., Z.), Mary Buchanan Thomson (B.), Jemima Wallace (C.), and Marion Aitken Wylie (Z., C.).

The following have passed the second professional examination for the degrees of M.B. and Ch.B. in the subjects indicated (A., Anatomy; P., Physiology; and M., Materia Medica and Therapeutics) :—

John Andrew Aitken (P.), David Anderson (M.), Donald Arbuckle (P.), Thomas Archibald (M.), William Hunter Stirling Armstrong (M.), James Currie Auchencloss (P., M.), Alexander Ballantyne, M.A. (P.), William Barr (A.), Charles Bennett (A., P., M.), John Blakely (M.), John Lindsay Boyd (M.), Charles Brash (P.), William Barrie Brownlie (M.), David Young Buchanan (A., P., M.), Hector Mackay Calder (M.), John Cameron (M.), Matthew Ignatius Thornton Cassidy (M.), Donald James Clark (A., M.), James Cook (Coalburn) (A., P.), James Cook (Partick) (M.), Walter Dawson (A., M.), Thomas Loudon Fleming (M.), Thomas Scott Forrest (A.), William Leonard Forsyth (M.), John Fotheringham, B.Sc. (M.*), William Ernest Gemmell (P.), Alexander Thomas Arthur Gourlay (A., M.), Thomas Edmondstone Gray (A., P., M.), Josiah

Stranaghan Harbinson (M.), Michael Harkin (A. P.), Stephen John Henry (A., P., M.), James Hall Hislop (A., P., M.), William Alexander Hislop (A., P., M.), Benjamin Hutchison (M.), Walter Hermann Kiep (M.), Thomas Joseph Kirk (P.), John Lang (M.), Daniel Conway M'Ardle (A.), Angus Macaulay (P., M.), Alexander Macphail Macdonald (A., P.), William M'Kendrick (A.), Francis William Mackichan (P., M.), William Campbell Mackie (A.), Alexander M'Kinnon (P.), John James Mackintosh (A., P., M.), James Walter M'Leod (M.), John MacMillan (M.), Allan M'Pherson (P., M.), Murdo M'Kenzie M'Rae (P., M.), Andrew Maguire (A., P.), William Aubrey Layard Marriott (P.), Frank Needham Marsh (A., P., M.), Kenneth Chisholm Middlemiss (M.), Robert Wright Mitchell (A., M.), John Mowat (P.), James Muir (A.), William Aikman Muir (M.), Charles Sutherland M'Kay Murison, (M.), Archibald Naismith (M.), Watson Noble (P., M.), David Purdie (A.), Edward Quigley (A., P., M.), Richard Rae (M.), Henry Nimmo Rankin (P., M.), Nicol M'Nicoll Rankin (M.), Hugo Given Robertson (A., M.), Allan Semple (P., M.), James Brown Sim (M.), Alexander Hunter Sinclair (M.), James John Sinclair (P.), Donald Stewart (A.), Edward Ernest Stewart (P.), David Taylor (M.), Walter Telfer (P.), John Shedden Thomson (A., M.), Arthur Turnbull, M.A. (A., P.*), Robert Macnair Walker (M.*), David M'Gruther Wilson (A.), John Alexander Wilson (A.), William Mitchell Turner Wilson (A., P., M.), John Youngson Wood (P., M.), Hugh Young (A., M.), and John Young (A., P.).

Women.—Margaret Baird Sproul Darroch (M.), Euphemia Adamson Hay (P.), Jessie Deans Rankin (A.), Olive Robertson (A., P.), Jessie Caple Russell (M.), and Jeanie Hinshaw Stewart (P.).

The following have passed the third professional examination for the degrees of M.B. and Ch.B. in the subjects indicated (P., Pathology; and M., Medical Jurisprudence and Public Health):—

Murdo Buchanan (P., M.), James Cairncross (P.), John Craig Crawford (P.), Neilson Davie (M.), James Cowie Dick (P.), James Dunbar (P.), William Hunter Duncan (P., M.), Allan Dunsmuir (P.), Alexander Wylie Eadie (M.*), William Marley Elliott (M.), John Ferguson (M.), Thomas Forsyth (P.), George Muir Fraser, M.A. (P., M.), Samuel Nicol Galbraith (M.), David Gibson (P., M.), John Vincent Grant (P., M.), James Dow Gray (P., M.), David Hamilton (P., M.), Alexander Mills Kennedy (P., M.), Charles Lawson Kerr (P., M.), James Towers Kirkland (M.), George Ligertwood (M.), Alexander Tulloh Inglis Macdonald (M.), James M'Donald (P., M.), Neil MacInnes, M.A. (P., M.), Robert M'Inroy (M.), Joseph Bogue Mackay (P., M.), Thomas Cooper Mackenzie (P.), James Hogg Martin (M.), William Spence Melville (M.), John Clark Middleton, M.A., B.Sc. (P.,* M.*), Allan Frederick Miller (M.), John Wilson Miller (M.), Thomas Miller (M.), John Oswald (P., M.), Daniel M'Kinlay Reid (P., M.), Thomas David Coulthard Ross (P., M.), James Alexander Stenhouse (M.), John Stewart, M.A., B.Sc. (P., M.), John Martin Taylor (M.), David Alexander Thomson, M.A. (P., M.), Hugh Johnstone Thomson (M.*), John Archibald Thomson (P., M.), Thomas Macnight Watt (P.), John Weir (P., M.), David John Williams (M.), Garabed Yeghia Yardumian (P.), and Matthew Young (P.,* M.).

Women.—Margaret Gardner Forrest (P., M.), Ella Smith Hill, M.A. (P., M.), Annie M'Crorie (M.), Janet Annie Macvea (P., M.), and Jane Isabel Robertson, M.A. (M.).

* Passed with distinction in the subjects indicated.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Max Henkel, *privat-docent* of Midwifery and Gynæcology, has been granted the title of Professor.—*Budapest:* Dr. L. Nékám has been recognised as *privat-docent* of Dermatology.—*Florence:* Dr. Enrico Burci has been appointed Professor of Clinical Surgery.—*Heidelberg:* Dr. Gottlieb Port has been appointed Extraordinary Professor of Odontology.—*Kazan:* Dr. V. Ossipoff of St. Petersburg has been appointed Extraordinary Professor of Psychiatry.—*Naples:* Dr. Elia Testa has been recognised as *privat-docent* of External Pathology and Dr. Gennaro Gallo De' Tommasi as *privat-docent* of Children's Diseases.—*Rome:* Dr. Raffaello Giani of Turin has been recognised as *privat-docent* of External Pathology.—*Turin:* Dr. Girolamo Scagliosi of Palermo has been recognised as *privat-docent* of Pathological Anatomy.

ROYAL SANITARY INSTITUTE.—A provincial sessional meeting of the Institute will be held at the Royal Pavilion, Brighton, on Saturday, Oct. 27th, at 11 A.M., when a discussion will take place on "Coördination of Measures against Tuberculosis." The discussion will be opened by Sir William H. Broadbent; to be followed by Dr. G. A. Heron; Dr. Louis C. Parkes, medical officer of health of Chelsea; Dr. John Robertson, medical officer of health of Birmingham; Dr. E. C. Seaton, medical officer of health of Surrey; Dr. F. R. Walters; and Dr. W. G. Willoughby, medical officer of health of Eastbourne. General discussion is invited. Dr. A. Newsholme will give a short account of local arrangements for the notification of pulmonary tuberculosis and the sanatorium training and treatment of patients. The chair will be occupied by Colonel J. Lane Notter, R.A.M.C. (chairman of council of the Institute). Tickets for admission of visitors may be had on application to Dr. Newsholme, medical officer of health, Town Hall, who is acting as the local honorary secretary of the meeting, and of Mr. E. White Wallis, secretary.

LONDON HOSPITAL MEDICAL COLLEGE.—The following entrance scholarships in arts have been awarded: Buxton scholarship (value £30), J. W. Clouston; and Buxton scholarship (value £20), L. M. Ladell.

ROYAL LONDON OPHTHALMIC HOSPITAL.—A special donation of £1000 has been received by the Royal London Ophthalmic Hospital from Mr. Henry Veasey, F.R.C.S. Eng., for the perpetual endowment of a bed.

AN UNCERTIFICATED MIDWIFE.—A woman of Totterdown, Bristol, was summoned at the Bristol police court on Oct. 5th for acting as a midwife without being certificated, contrary to the provisions of the Act. Evidence showed that the woman had been employed as a midwife for years and had her name on a brass plate attached to her house but had never been registered. The coroner had cautioned the defendant when she had appeared before him at inquests. She was now warned that she must not go on practising as a midwife and as it was the first case in Bristol she was only fined 5*s.* and costs.

THE INFANTS' HOSPITAL.—From the time of the establishment of the Infants' Hospital in Hampstead in 1903 it has been the intention of the committee to remove to more commodious premises in a more central situation as soon as a convenient opportunity and sufficiency of financial support offered themselves. In the early part of the present year active inquiries were instituted with a view of finding suitable premises which have resulted in the acquisition of a site in Vincent-square, Westminster, at the corner of Alfred-street, a long lease being granted by the Ecclesiastical Commissioners. The new hospital will comprise accommodation for some 50 or more infants, together with adequate accommodation for the nursing staff, pathological laboratories, post-mortem room, lecture theatre, &c. The whole cost of the site, together with the building and equipment of the hospital, is being defrayed by Dr. Ludwig Mond and his son Mr. Robert Mond.

LITERARY INTELLIGENCE.—A new monthly magazine, in the interests of literature generally, will be issued shortly under the title of "The Amateur Journalist and Literary Aspirant." It will be edited by Mr. Oliver McEwan, director of the British School of Journalism, 97, New Bond-street, London, W., who has been a journalistic coach for nearly a quarter of a century. He will be assisted by several well-known writers, and a feature of the journal will be that nearly every article, story, and illustration will be the first published efforts of new writers and black and white artists.—Messrs. Baillière, Tindall, and Cox announce the following new works and new editions to be published during this week: "Questions and Answers on Midwifery for Midwives," second edition, by A. B. Calder; "Röntgen-Rays in Medical Practice," by Higham Cooper; "High-Frequency Currents," by Evelyn Crook; "Enlargement of the Prostate," third edition, by P. J. Freyer; "Lectures on Diseases of the Lungs," second edition, by J. Lindsay; "Syphilology and Venereal Disease," by C. F. Marshall; "Retro-Peritoneal Hernia," second edition, by B. G. Moynihan; "The Sigmoidascope," by P. L. Mummery; "Enteric Fever," by E. Roberts; "Nature and Treatment of Cancer," fourth edition, by J. A. Shaw-Mackenzie; "Manual of Chemistry," eighth edition, by W. Simon; "Clinical Studies of Nutritional Disorders of Infancy," by Ralph Vincent; "Minor Maladies," by L. Williams; and "Handbook of the Hospital Corps of the United States Navy and Army," by C. F. Mason.—The Calendar of the University of London for 1906-07 is now on sale. As in previous years it is published in three volumes. Vol. I. (pp. 626, 5*s.* net) contains a history of the University, constitution, *personnel*, statistics, register of students and graduates, honours lists, and regulations for matriculation. Vol. II. (pp. 936, 5*s.* net) contains full information of the internal work of the University, including descriptions of schools of the University and regulations for degrees for internal students; together with particulars of the work of the University Extension Board. Vol. III. (pp. 554, 2*s.* 6*d.* net, post free) contains the regulations for degrees for external students, including the revised regulations in arts under which certain science subjects may be taken at the intermediate and final (pass) examinations. It should be noted that the list of subjects and the rules for the choice of subjects in arts examinations

are not the same for internal and for external students but Latin or Greek is compulsory at the intermediate and final (pass) examinations for both classes.

VACCINATION GRANT.—The Local Government Board has for the fourth year in succession awarded the vaccination grant to Mr. Napier Close, public vaccinator of No. 2 Chard district.

UNIVERSITY OF CAMBRIDGE.—Dr. W. L. H. Duckworth, Fellow of Jesus College, has been appointed Demonstrator of Anatomy.—The First M.B., Second M.B., and Third M.B., Part I., will begin this term on Dec. 10th; the Third M.B., Part II., and the M.C. examination on Dec. 11th. Names of candidates have to be sent to the Registrary by Nov. 24th.

PRESENTATION TO A MEDICAL PRACTITIONER.—At Stuckey's Restaurant, Bristol, on Sept. 29th, Colonel Evan Llewellyn, on behalf of the class of the St. John Ambulance organised in connexion with the Great Western Railway Company, presented Mr. Harry F. Devis, L.R.C.P. Lond., M.R.C.S. Eng., with a silver cigar case in appreciation of his services as honorary lecturer.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The autumn meeting of the south-eastern division of the above association will be held, by the courtesy of the governors, at the Bethel Hospital, Norwich, on Wednesday, Oct. 17th. The following papers will be read:—Dr. James Fielding, A Short History of the Bethel Hospital; and Dr. Samuel J. Barton, An Epidemic of Sore Throat at the Bethel Hospital. The members will dine together after the meeting at the Royal Hotel, Norwich, at 6.30 P.M., provided that a sufficient number agree to be present. (Dinner 5*s*., exclusive of wine.) Evening dress optional.

DONATIONS AND BEQUESTS.—By the will of Miss Mary Elizabeth Humberston of Newton Hall, Chester, £500 are left to Chester Infirmary and £500 to Parkgate Convalescent Home.—The late Mr. Henry Brown of Alveston, Gloucestershire, has bequeathed £200 each to the Bristol Royal Infirmary and Bristol General Hospital, and £100 each to the Bristol Children's Hospital, Royal United Hospital, Bath, and the Bath Mineral Water Hospital.—Lord Wimborne has given £1000 to the fund for the erection of a new hospital at Poole.—By his will Mr. Charles Reeve has bequeathed £500 to the London Temperance Hospital and £500 to the Royal Hospital for Incurables at Putney.—By her will Mrs. Lucy A. Hills has left £3000 to St. Bartholomew's Hospital in memory of her late father.

UNIVERSITY COLLEGE, LONDON.—The following medical entrance exhibitions have been awarded: First exhibition of 80 guineas, T. R. Elliott, Trinity College, Cambridge; second exhibition divided equally (£42 each), E. K. Martin, University College, London; and H. C. R. Darling, Otago University, N.Z., and University College, London. The following awards were made at the end of the past summer session: Atkinson Morley scholarship, H. E. Dyson; Atchison scholarship for general proficiency in medicine, Otto May; Filliter exhibition for proficiency in pathology, E. M. Cowell and T. S. Higgins; Fellowes clinical medal, J. C. R. Canney; Tuke silver medal for pathology, T. S. Higgins; and Erichsen prize for practical surgery, D. C. Taylor. The following awards of the Bucknill scholarship and entrance exhibitions have been made: Bucknill scholarship of 135 guineas, W. C. Fowler, Alleyn School, Dulwich; First exhibition of 55 guineas, D. J. Jones, Charterhouse; and Second exhibition of 55 guineas, A. C. S. Courts, University College, London.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held on Oct. 4th at Caxton House, Westminster, Dr. F. H. Champneys being in the chair. At the meeting of the Board on July 26th last a letter from the Privy Council, dated July 24th, 1906, as to the new rules was read, considered, and referred to the standing committee (see THE LANCET, August 4th, p. 316). The report of the standing committee of the Board was now received and the Board unanimously agreed that the Privy Council should be informed:—

1. That the Board do not see their way to acquiescing in the amendments suggested by the Privy Council with respect to Poor-law Institutions. 2. That the resolutions referring to the number of cases qualifying institutions or teachers for approval by the Board were formed merely for their own guidance and were of a tentative nature only. The Board did not wish them to be stereotyped in any way and do not consider that they are "rules" within the meaning of the Act requiring formal approval by the Privy Council. 3. That the suggestion that a new rule should be made imposing upon midwives the duty of notifying to the local supervising authority every birth occurring in their practice has already been considered by the Board, who thereupon resolved that in their opinion the matter was one for legislation and not for a rule of the Board.

A letter was read from Dr. E. W. Hope, medical officer of health of Liverpool, calling attention to a circular issued by a certified midwife advertising herself as a herbalist. The Board decided that Dr. Hope should be informed that the Board possesses no power to interfere in the circumstances stated. Sundry letters were read regarding the conduct of certain midwives and they were directed to be cautioned as to their future behaviour. The Secretary of the Board reported that at the August examination there were 245 candidates and that the number rejected was 53, or 21·6 per cent.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BARBER, ALEC, M.R.C.S., L.R.C.P. Lond., B.S., has been appointed Junior House Surgeon at the Great Northern Central Hospital, Holloway-road, N.

BROWN, A. CARNARVON, M.R.C.S., L.R.C.P. Lond., has been appointed Senior House Physician at the Great Northern Central Hospital, Holloway-road, N.

BROWN, ROBERT, M.B., Ch.B., has been appointed Junior House Surgeon at the Great Northern Central Hospital, Holloway-road, N.

CLARK, JAMES, M.B., Ch.B., has been appointed Senior House Surgeon at the Great Northern Central Hospital, Holloway-road, N.

GUNN, RODERICK M., M.B., Ch.B., B.S., has been appointed Junior House Physician at the Great Northern Central Hospital, Holloway-road, N.

HAIGERT, JOHN FREDERIC, M.B., C.M. Edin., has been appointed a District Medical Officer by the Bristol Board of Guardians.

HOLDEN, ARTHUR S., M.B., Ch.B. Edin., has been appointed Assistant Resident Medical Officer at the Sheffield Union Hospital.

LONGWILL, DAVID, M.B., Ch.B. Glasg., has been appointed Medical Officer of Health for Shettleston District by the Glasgow Parish Council.

LYON, GEORGE, M.B., Ch.B., F.R.C.S. Edin., has been appointed Pathologist to the Great Northern Central Hospital, Holloway-road, N.

JAMES, W. T., M.B., B.S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the New Quay District of the county of Cardigan.

MACKENZIE, T. C., M.B., M.R.C.P. Edin., has been appointed Senior Assistant Physician at the Royal Asylum, Aberdeen.

MANSON, J. S., M.B., Ch.B. Edin., has been appointed Senior House Surgeon at the Oldham Infirmary.

PICKETT, JACOB, M.D. St. And., M.R.C.S., has been appointed Consulting Surgeon to the Metropolitan Ear, Nose, and Throat Hospital.

PRICE, DAVID THOMAS, M.B. Lond., has been appointed Medical Officer by the Shepton Mallett (Somerset) Board of Guardians.

RHIND, THOMAS, L.R.C.P. Lond., M.R.C.S., D.P.H. Camb., has been appointed Medical Officer and Public Vaccinator for the Hawkesbury District by the Chipping Sodbury (Gloucestershire) Board of Guardians.

RUTHERFORD, JOHN V. W., M.B., M.S. Edin., has been appointed Honorary Surgeon to the Royal Infirmary, Newcastle-on-Tyne.

SMITH, HOYLAND, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior Resident Medical Officer at the Sheffield Union Hospital.

SMITH, W. B. A., M.D., M.S. Dub., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Belper District of the county of Derby.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, S.W.—Assistant Physician. Also Senior and Junior Resident Medical Officers. Honorarium at rate of £20 and £10 a year respectively, with board and lodging.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL, Edmund-street. House Surgeon. Salary at rate of £70 per annum.

BODMIN, CORNWALL COUNTY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £150 per annum, increasing to £180, with board, apartments, washing, &c.

BRADFORD ROYAL INFIRMARY.—House Physician. Also House Surgeon. Salaries £100 per annum, with board and residence.

BURY ST. EDMUND'S, WEST SUFFOLK GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

CANTERBURY, KENT AND CANTERBURY HOSPITAL.—House Surgeon, unmarried. Salary £90 a year, with board and lodging.

CAPE TOWN, SOMERSET HOSPITAL.—Assistant Resident Medical Officer. Salary £200 per annum, with quarters and rations.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. Salary at rate of £50 per annum, with board, lodging, and washing. Also Pathologist. Salary 100 guineas per annum.

DURHAM COUNTY HOSPITAL.—House Surgeon. Salary £120, with board and lodging.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark.—House Physician and House Surgeon. Salary £80 respectively, with board, residence, and washing. Also Assistant House Surgeon. Salary £70, with board, residence, and washing.

GORDON HOSPITAL FOR FISTULA, &c., Vauxhall Bridge-road, S.W.—Resident House Surgeon. Also Surgeon to Out-patients.

HOSPITAL FOR WOMEN, Soho-square, W.—House Physician for six months. Salary £30.

KENSINGTON GUARDIANS.—Medical Officer for No. 3 Relief District. Salary £100 per annum and fees.

LEEDS, HOSPITAL FOR WOMEN AND CHILDREN.—House Surgeon for six months. Salary at rate of £80 per annum, with board, &c. Also Resident Clinical Assistant for three months.

LEICESTER INFIRMARY.—Assistant House Surgeon. Salary £50 per annum, with board, apartments, and washing.

LINCOLN COUNTY HOSPITAL.—Junior House Surgeon (unmarried) for six months. Honorarium £25, with board, residence, and washing.

MARGATE, ROYAL SEA BATHING HOSPITAL.—Resident Surgeon.

MEDICAL DEPARTMENT OF THE ROYAL NAVY.—Examination for not more than Six Commissions.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Anæsthetist (Honorary).

NEW HOSPITAL FOR WOMEN.—Senior Assistant in the Out-patient Department, Senior Assistant to the Ophthalmic Department, and Two Clinical Assistants, all females.

NOTTINGHAM, CITY ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, board, &c.

POPLAR HOSPITAL FOR ACCIDENTS, E.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board and residence.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.—Superintendent of the Laboratory.

SAINT LEONARD, SHOREDITCH, INFIRMARY.—Second Assistant Medical Officer. Salary £100 per annum, with rations, washing, and apartments.

SALFORD ROYAL HOSPITAL.—Accident House Surgeon and Junior House Surgeon. Salaries at rate of £60 and £50 per annum respectively, with board and residence.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—House Physician. Salary £100 per annum, with rooms, board, and washing.

STAMFORD HILL AND STOKE NEWINGTON DISPENSARY.—Junior Resident Medical Officer. Salary £100 a year with apartments and board.

TOTTENHAM HOSPITAL, London, N.—House Surgeon, House Physician, and Casualty Officer. Salaries £90, £60, and £40 per annum respectively, with residence, board, and laundry.

WINDSOR AND ETON ROYAL DISPENSARY AND INFIRMARY.—House Surgeon, unmarried. Salary £120 per annum, with residence, board, laundry, and attendance.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Physician. Salary £100 per annum, with board, lodging, and laundry. Also House Surgeon. Salary £100 per annum, with board, lodging, and laundry.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Woburn Sands, in the county of Buckingham, and at Arnesby, in the county of Leicester.

Births, Marriages, and Deaths.

BIRTHS.

ARCHER.—On Oct. 7th, at Hamlet Court-road, Westcliffe, Essex, the wife of Archibald Archer, L.D.S. Eng., of a son.

BOOKER.—On Oct. 1st, at Witley, Surrey, the wife of Charles W. Booker, F.R.C.S., of a daughter.

GILL.—On Sept. 12th, 1906, at Murree, Punjab, India, the wife of Captain Clifford A. Gill, of a son.

DEATHS.

BRADEN.—On Oct. 4th, at his residence, "Alethia," Shalford, J. G. Braden, M.R.C.S., L.S.A., after many months of suffering, borne with great patience. Dearly loved and deeply lamented. Sussex papers please copy.

WATHEN.—On Oct. 5th, at Sea Walls, Stoke Bishop, John Hancocke Wathen M.R.C.S., L.R.C.P., in his 62nd year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths

Notes, Short Comments, and Answers to Correspondents.

CONCERNING BODIE.

WE take the following cutting from the *Daily Telegraph* of Oct. 10th:—

CANTERBURY.—DR. BODIE. DR. BODIE. DR. BODIE.—SPECIAL NOTICE.—On SUNDAY NEXT, Oct. 14, 1906, a LECTURE and Demonstration will be given by this well-known exponent of BLOODLESS SURGERY, Dr. WALFORD BODIE, M.D.C.M. U.S.A., F.R.M.S. London, entitled, "WHAT IS A MIRACLE?" Hypnotism v. Scientific Medicine, Christian Scientists v. The Peculiar People. The whole of the proceeds will be given to the Waterloo Hospital for Women and Children, and will be under the patronage of the leading Professors, Doctors, and Clergy of London. On this special occasion Dr. Walford Bodie will introduce many of his London cures and will endeavour to illustrate and demonstrate "A MODERN MIRACLE." Prices of admission: Fauteuils, 1s.; pit and balcony, 6d. Doors open at seven o'clock. Commence 7.30 prompt. Carriages may be ordered at nine o'clock.

We learn that the authorities of the Waterloo Hospital for Women and Children are no parties to these proceedings, and that any hospital should consent to take money gained by the performances of a swindling quack we cannot believe. It will be remembered that it was proved in court that one of "Dr." Walford Bodie's "cures" was a man who pretended to be ill and pretended to be cured. We refer the authorities of the Waterloo Hospital to what we said about Bodie in THE LANCET of August 11th, 1906, p. 415, and May 26th, 1906, p. 1512. As for the performance being under the patronage of the "leading professors, doctors, and clergy in London" that we take to be simply an untruth.

THE FEES OF A LOCUM TENENT.

To the Editors of THE LANCET.

SIRS,—A short time ago I acted as locum for A who went away. Another doctor, B, in the same town asked me to do a post mortem. I did this and gave evidence. Later, B handed me a guinea, saying that he wished me to have it. Since then I disagreed with B about other matters and now A writes to say that he (A) should have the guinea. I shall be interested to read your view of the matter if you will be so kind as to give an opinion. I am, Sirs, yours faithfully,

Oct. 5th, 1906. SURPRISED.

*** We are ignorant of the terms of the contract under which "Surprised" undertook to fill A's place. As a rule, a locum-tenent gets so much per week and all fees which he earns during his locum-tenency are taken by the practitioner whose deputy he is.—ED. L.

OMNE IGNOTUM PRO MAGNIFICO.

To the Editors of THE LANCET.

SIRS,—I wonder if I should be trespassing upon your valuable space in narrating an event which happened to me to-day? I met and recognised a woman in the street who some years ago was an in-patient at a metropolitan hospital of which I was a resident. I asked her after her health and she told me she was suffering from heart disease. I interrogated her as to whether she had sought advice. She answered in the affirmative and stated that she had been to the same hospital where she had been an in-patient. Upon being asked whether the doctor had told her she had heart disease she answered in the negative. I asked her accordingly how she knew. She said she read it in her out-patient book but had never heard of the disease and did not know how to pronounce it. I told her to spell it and she slowly spelled out the fateful words—Heart: Nil. I am, Sirs, yours faithfully,

Oct. 8th, 1906. B. H. C.

THE INADEQUACY OF THE TELEPHONE SERVICE.

To the Editors of THE LANCET.

SIRS,—Now that the telephone service has been thoroughly (although very belatedly) installed in London and has been in work some years the public might reasonably expect a fairly efficient service. What do the public, however, usually receive for a very highly charged service? It is generally a work of considerable time, if indeed it is accomplished at all, to get through from one exchange to a subscriber on another. It is beyond doubt that to get through from a post office exchange to a subscriber on a Gerrard (which is a National Telephone exchange) is almost hopeless; at least, that is my experience after numerous complaints to the authorities, and the only means is to ring up the clerk in charge. This costs two fees instead of one. It may be the inadequacy in the number of exchange lines or the preoccupied time of the young lady at the exchange.

This is not, perhaps, of vital consequence (beyond loss of temper), excepting in cases of serious illness; then in the interests of the community the call should become next in precedence to a fire call. I would humbly offer these suggestio to the authorities—that some distinct call should be used in ringing up either to or by a doctor and that in these cases the young ladies at the exchange should be requested to get the call through with expedition.

I am, Sirs, yours faithfully,

Oct. 5th, 1906. A GENERAL PRACTITIONER.

ST. JOHN'S HOUSE OF REST, MENTONE.

To the Editors of THE LANCET.

SIRS,—Will you allow me to call attention to an advertisement which appears in your columns respecting St. John's House of Rest for gentlemen at Mentone? It was founded by the late Canon Sidebotham for the reception of *gentlemen*, either laymen or clerics, who from overwork, previous severe illness (not tuberculous), or any other cause need rest and refreshment in a mild climate and whose means are such as to preclude their meeting the usual cost of a visit to the Riviera. An erroneous idea seems to have hitherto prevailed that the house was intended for clergy only; this is not so, and, indeed, several medical men have been received. The terms of admission are so low that part of the expense of maintaining the institution has to be met by subscriptions and donations. As a regular resident at Mentone I take very great interest in the House of Rest and as a member of its council I have every opportunity of becoming acquainted with its working; and I can truly say that its charming situation and the great advantages it offers render it a most desirable place of abode and its low charges make it possible for many to avail themselves of it.

I am, Sirs, yours faithfully,

Oct. 3rd, 1906. W. H. AXFORD.

RAMIE FIBRE.

RAMIE fibre is extracted from the "bark" of an Asiatic plant belonging to the nettle family. It is singularly tough and has a curiously silky lustre. Messrs. the J. Spencer Turner Co. of Jewin-crescent, London, E.C., have submitted some underclothing made from this fabric to our notice. It is stated to be a very bad conductor of heat and to be unshrinkable; also to be cool in summer and warm in winter. We learn from our representative, to whom we submitted it for trial, that it is very comfortable and gives the wearer a curious sensation of being cool and warm at the same time, or, to use his own words, the sensation of being totally unclad in really warm air. On the whole we should think that it was a suitable material for underclothing.

RODENT ULCER AND LUPUS.

To the Editors of THE LANCET.

SIRS,—If any of my medical brethren in country practices have any cases of "epithelioma," "rodent ulcer," or "lupus" under treatment would they kindly communicate with me.

I am, Sirs, yours faithfully,

J. W. LANE, M.D.

Stavordale House, Weymouth, Sept. 24th, 1906.

SECRET REMEDIES.

To the Editors of THE LANCET.

SIRS,—Can your readers give me any information as to the secret remedy Activin (20, Bucklersbury, E.C.)? In the case of disease which the medical profession is unable to cure, such as asthma, would it not be a great advantage if THE LANCET were to analyse and publish the ingredients of the principal secret remedies relating thereto? I may mention that a certain proprietary asthma cure was strongly recommended to me by a fully qualified man as the only thing which had relieved him. The cost is £3 and the profit must be enormous.

I am, Sirs, yours faithfully,

Oct. 7th, 1906. L.R.C.P.

THE ADULTERATION OF BRANDY.

A KENSINGTON publican was recently fined £20 for selling as brandy a compound containing at least 54·34 per cent. of spirit not derived from grape-juice. The chairman of the Kensington divisional magistrates made observations as to the supineness of the British Government in checking adulteration and spoke of the tendency of traders to regard adulteration as a recognised form of commercial competition.

M.B. Cantab.—Our correspondent will find in the Students' Number of THE LANCET some information under the heading of post-graduate instruction which will help him in the matter which he has submitted to us. Probably the most convenient hospital for his purpose would be the Royal London Ophthalmic Hospital. We would, however, impress upon him the fact that no one is justified in ordering glasses until he has corrected a very large number of refractions under skilled supervision. The apparatus mentioned in the second part of our correspondent's letter is quite satisfactory but as regards the instruction we could not advise him to receive it unless he has been previously thoroughly well grounded in ophthalmic work at an ophthalmic hospital.

A. F.—1. We believe that in some districts coroners are paid according to the number of inquests held. In other districts they get a certain fixed salary. 2. It is quite possible for a medical man to perform the duties of a coroner and at the same time to carry on his practice. 3. Coroners are now appointed by the local authorities and when there is a vacancy in the office of coroner the whole neighbourhood speedily becomes acquainted with the fact. The vacancies are sometimes advertised in the local press. Our correspondent might be able to obtain more detailed information by applying to the Secretary of the Coroners' Society, the Coroners' Court, Manor-place, Paddington Green, London, W.

Calamus.—In the circumstances we think that our correspondent may allow some notification of his claims to office to be published. The biography of which he speaks should only contain matters dealing with any special form of medical training connected with public health and municipal work.

Junior General Practitioner.—There is no legal obligation for a medical man to state definitely the nature of the illness on any club certificate.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (3 P.M.).

TUESDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M.), Ophthalmic, 2.15 P.M.).

WEDNESDAY (17th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.).

THURSDAY (18th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.).

FRIDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), St. Mark's (2.30 P.M.).

SATURDAY (20th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (17th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M.: Papers:—Mr. J. Murray: Some Rotifera of the Sikkim Himalaya.—Mr. J. M. Coon: Cornuvia Serpula, a Species of Mycetozoa new to Britain.

THURSDAY (18th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—8 P.M.: Card Specimens. 8.30 P.M.: Papers:—Mr. H. Spicer: Intraocular Infections.—Mr. G. Coats: Posterior Scleritis.—Dr. Edridge-Green: Observations on Hue Perception.

FRIDAY (19th).—SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—5 P.M. Clinical Cases. Papers.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (15th).—POST-GRADUATE COLLEGE (West London Hospital) Hammersmith road, W.).—2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: X Rays. Operations. Diseases of the Eye. 5 P.M.: Lecture:—Clinical.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. G. Pernet: Clinique. (Skin) 5.15 P.M.: Lecture:—Mr. C. R. B. Keetley: Appendicostomy.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Sir D. Duckworth: Medicine. 3.15 P.M.: Mr. W. Turner: Surgery. 4 P.M.: Dr. StClair Thomson: Throat and Ear. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat.

TUESDAY (16th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. Diseases of the Throat, Nose, and Ear. 2.30 P.M.: X Rays. Operations. Diseases of the Skin. 5 P.M.: Lecture:—Insects as Carriers of Disease.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street W.C.).—4 P.M.: Dr G A. Sutherland: Clinique. (Medical.) 5.15 P.M.: Lecture:—Dr. J. S Collier: The Diagnosis and Treatment of Local Lesions of the Spinal Cord.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. R. T. Hewlett: Medicine. 3.15 P.M.: Mr. Carless: Surgery. 4 P.M.: Mr. M Morris: Diseases of the Skin. Out patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Dr. Batten: Anterior Poliomyelitis.

CHARING CROSS HOSPITAL.—4 P.M.: Demonstration:—Dr. M. Bruce: (Medical) (Post-Graduate Course.)

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M.: Lecture:—Dr. G. N. Meachen: Methods of Diagnosis in Skin Diseases.

CENTRAL LONDON OPHTHALMIC HOSPITAL (Gray's Inn-road, W.C.).—5 P.M.: Mr. Wells and Mr. Maclehose: Classes of Instruction in the Use of the Ophthalmoscope, with Demonstrations of Cases.

WEDNESDAY (17th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Diseases of the Throat, Nose, and Ear. Diseases of Children. 2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: X Rays. Operations. 5 P.M.: Lecture:—Unusual Cases of Appendicitis.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. L. Mummery: Clinique. (Surgical.) 5.15 P.M.: Lecture:—Dr. J. S Collier: The Pathology and Treatment of Cerebral Vascular Lesions.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. R. Wells: Medicine. 3.15 P.M.: Mr. M. Robson: Surgery. 4 P.M.: Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M.: Demonstration:—Dr. D. Grant: Case Taking.

THURSDAY (18th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: X Rays. Operations. Diseases of the Eye. 5 P.M.: Lecture:—Anæsthetics.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M.: Lecture:—Mr. M. Morris: The Treatment of Some Common Skin Affections.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. G. Rankin: Medicine. 3.15 P.M.: Sir W. Bennett: Surgery. 4 P.M.: Mr. M. Davidson: Radiography. Out patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Ear and Throat.

CHARING CROSS HOSPITAL.—4 P.M.: Mr. Boyd: Demonstration (Surgical) (Post Graduate Course.)

NORTH-EAST LONDON POST GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M.: Lecture:—Dr. D. Forsyth: Rectal Feeding.

CENTRAL LONDON OPHTHALMIC HOSPITAL (Gray's Inn-road, W.C.).—5 P.M.: Lecture-Demonstration:—Dr. C. O. Hawthorne: Medical Ophthalmology.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—6 P.M.: Chesterfield Lecture:—Dr. M. Dockrell: Eczema, its Varieties, Symptoms, and Causes.

FRIDAY (19th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. Diseases of the Throat, Nose, and Ear. 2.30 P.M.: X Rays. Operations. Diseases of the Skin. 5 P.M.: Lecture:—Surgical Cases.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. S Stephenson. Clinique. (Eye.)

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich).—2.30 P.M.: Operations. 2.30 P.M.: Dr. R. Bradford: Medicine. 3.15 P.M.: Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 12 noon: Skin.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M.: Clinical Lecture:—Dr. Batten: Tumours of Spinal Cord.

SATURDAY (20th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Diseases of the Throat, Nose, and Ear. 2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: X Rays. Operations.

LONDON SCHOOL OF CLINICAL MEDICINE (Dreadnought Hospital, Greenwich.)—2.30 P.M.: Operations. Out-patient Demonstrations:—10 A.M.: Surgical and Medical. 11 A.M.: Eye.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 11th, 1906.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind	Rainfall.	Solar Radiation in Vacuo	Maximum Temp. in Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Oct.	5	29·74	S.W.	...	99	66	58	61	65	Cloudy
,,	6	30·00	S.W.	...	105	65	53	53	55	Fine
,,	7	29·98	S.W.	...	84	66	55	55	57	Fine
,,	8	29·84	S.W.	0·19	103	66	55	56	57	Fine
,,	9	29·84	S.W.	0·24	80	62	54	57	59	Cloudy
,,	10	29·83	S.	0·19	94	69	59	59	62	Cloudy
,,	11	29·75	S.	...	90	68	53	58	61	Fine

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